

# THEMATIC SURVEY

## THEMATIC SURVEY OF EARLY AUTOMOTIVE HISTORY IN LANSING, MICHIGAN FROM 1890 TO 1930

JULY 2003

*Prepared for:*

*City of Lansing  
Department of Planning and  
Neighborhood Development  
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Civil Engineering, Surveying and  
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Toledo ♦ Dearborn ♦ Detroit ♦ Lansing ♦ Monroe

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DEPARTMENT OF PLANNING AND NEIGHBORHOOD DEVELOPMENT  
316 NORTH CAPITOL AVENUE, SUITE D-1  
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## **DISCLAIMER**

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## INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) was contracted by the City of Lansing in January of 2003 to conduct a thematic survey and context narrative for Lansing's automotive industry during the period from 1890 to 1930. Because the history of the major automobile manufacturers has been extensively documented through previous works, the subject of R.E. Olds, Olds Motor Works, General Motors and William Durant was not addressed in this report, except as part of the broad overview of industrial development and innovation in Lansing. Instead, the focus of this project was on the various other manufacturers, suppliers, and individuals that helped support and advance the automobile industry in Lansing, making it "the great automobile city of Michigan."

Funded in part by a grant from the State of Michigan Department of History, Arts and Libraries, the project was conducted in accordance with appropriate state and federal guidelines and standards.<sup>1</sup> The project was also supported with funds from the City of Lansing and the MotorCities-Automobile National Heritage Area (ANHA), one of twenty-three Congressionally designated National Heritage Areas in the U.S. and an affiliate of the National Park Service (NPS). Since 1998, MotorCities-ANHA has been working in partnership with communities throughout southeastern and central Michigan to preserve, interpret and promote Michigan's rich automotive and labor heritage. As part of the ANHA network, Lansing has been designated a Hub District within the Lansing Stewardship Community, its mission to enhance and improve the visitor experience, and to encourage appropriate resource preservation, development and use there. This thematic survey project was undertaken to meet the complementary goals of all three project sponsors: to identify the resources in Lansing that tell the story of the auto industry, and to generate data that may assist future planning, marketing and preservation efforts on their behalf.

Key personnel committed to this project were Maura Johnson (project manager/architectural historian), Daniel Hershberger (technical advisor/transportation historian), William Rutter (principal investigator/historian) and Sylvia Tillman (architectural technician). A brief summary of the qualifications and contributions of the team members is presented below.

**Maura Johnson** holds a M.A. in Historic Preservation Planning from Cornell University, and is federally certified (36 CFR 61) as an architectural historian. She has over seventeen years experience as a preservation planning professional, working in municipal and state program administration, as well as private consulting. Ms. Johnson assumed primary responsibility for survey management, agency coordination, and report production, and was the principal project contact for the City of Lansing.

**Daniel Hershberger** has been involved with research and documentation of the American roadside for over 20 years. While a member of the faculty at the Center for Creative Studies/College of Art and Design (CCS) in Detroit, he created and taught a course entitled *Gas, Food and Lodging: The Design of the American Roadside*. More recently, he taught a graduate-level roadside history course in Eastern Michigan University's Historic Preservation Program, and has been a regularly-featured instructor of roadside-related adult classes at the Henry Ford Museum. Mr. Hershberger holds a B.F.A. in advertising design from CCS. He served as principal photographer, research assistant and technical specialist for this project.

**William Rutter** received M.A. degrees in Historic Preservation from Eastern Michigan University and in Anthropology from Western Michigan University. He has over twenty years experience in the cultural

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<sup>1</sup> Guidelines for the report include the *Secretary of the Interior's Standards and Guidelines for Evaluation* (48 CFR 190), *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, and the *Manual for Historic and Architectural Survey in Michigan* (Michigan Historical Center, 2001).

resources management field, and is professionally qualified (36 CFR 61) as both an architectural historian and historian. Mr. Rutter provided quality assurance and technical review for the project.

**Sylvia Tillman** holds a M.S. degree in Preservation Planning from Eastern Michigan University (2002). Ms. Tillman has previously conducted architectural evaluations for federal undertakings in the City of Detroit. Her survey experience includes class projects in Ohio and Michigan. For this project Ms. Tillman assisted in field survey, research and data entry.

A number of organizations and individuals from within the Lansing community also helped in the production of this report. Members of the Lansing Historic District Commission (LHD) and the Lansing Stewardship Community Board (LSC) of ANHA provided guidance in the early stages of the project, and directed us to local resources, research materials and collections that might otherwise have been overlooked. David Tijerina, John Grannell and the staff at the City Assessor's Office graciously assisted in retrieving obscure public records for research and documentation purposes. Craig Whitford, President of the Historical Society of Greater Lansing, offered valuable insight into Lansing's innovations in the field of motorized fire apparatus. Dave Pfaff also generously shared research materials he has gathered that represent a long-standing personal commitment to the subject of Lansing's automotive history. A special thanks goes to Jim McLean and the reference staff at the Forest Park Memorial Library/Capital Area District Library (FPML/CADL) in downtown Lansing, who gave us access to their collections, and who supported us with their considerable knowledge, talents and encouragement.

## PROJECT OBJECTIVES AND METHODOLOGY

The auto industry has had a far-reaching impact on the social, economic and cultural development of Lansing, and it continues to be a source of community pride and self-identity. The story of the major businesses and leaders associated with Lansing's auto industry has already been well-documented, but the contributions of the second-tier manufacturers and suppliers are generally not so well known<sup>2</sup>. The goal of this project was to examine the contributions of the lesser-known auto-related industries and suppliers in Lansing, and to look at the physical evidence of their activities in the period from 1890 to 1930. Limits of the study were defined by Lake Lansing Road to the north, Holmes Road to the south, US 127 to the east, and Deerfield Avenue to the west, an area of approximately 17.5 square miles (or 11,198 acres), as illustrated on Figure 1. These boundaries roughly correspond to the city's 1917 corporate limits, and they represent the area of highest population density, commercial activity, and industrial production in Lansing during the period of our investigations.

Background literature and data review was conducted in December of 2002 at the Michigan State Historic Preservation Office (SHPO). The purpose of the data review was to identify historic resources within the current project boundaries that were previously recorded in federal and state registries. Our review of the SHPO records identified one historic district and twenty-two individual properties listed in the National Register of Historic Places, as well as ten districts and thirty-seven properties determined to be potentially eligible for National Register listing by the SHPO. In addition, we identified two historic districts that are currently designated under Lansing's Historic District Ordinance. Both local districts – the Cherry Hill Historic District and Ottawa/Walnut Historic District – are comprised exclusively of residential buildings.

Files at the SHPO and LPO library also indicate that four survey reports have been produced for the City of Lansing since 1976. The surveys encompass most of the older neighborhoods in the downtown area, along with seventeen areas of historic potential in the adjoining neighborhoods and districts:

Branstner, Mark C. and John M. Gram

1999 *A Phase III Architectural Resource Survey: Three Downtown Neighborhoods, Lansing, MI*. A cultural resource management study prepared for the City of Lansing and the Michigan State Historic Preservation Office by Great Lakes Research, Inc. Report on file SHPO.

Henry, Irene Jackson and William Henry

1998 *Lansing Architectural Survey II: Historical and Architectural Surveys of Selected Previously Unsurveyed Areas*. Submitted to the City of Lansing by Henry & Henry Preservation and Architectural Consultants. Report on file SHPO.

Lansing Historic District Study Committee

1976 *Memorandum 76: Historic Lansing, Yesterday, Today and Tomorrow*. Report on file Lansing Planning Office library.

Schneider, Robert and Laurie Sommers

1986 *Final Report for a Reconnaissance Level Survey of Historic and Architectural Resources in Lansing's Central Neighborhoods*. Report on file SHPO.

Because the boundaries for the current project include most incorporated areas of Lansing, there was considerable overlap in past and current survey efforts, both in geographic scope and in terms of historic

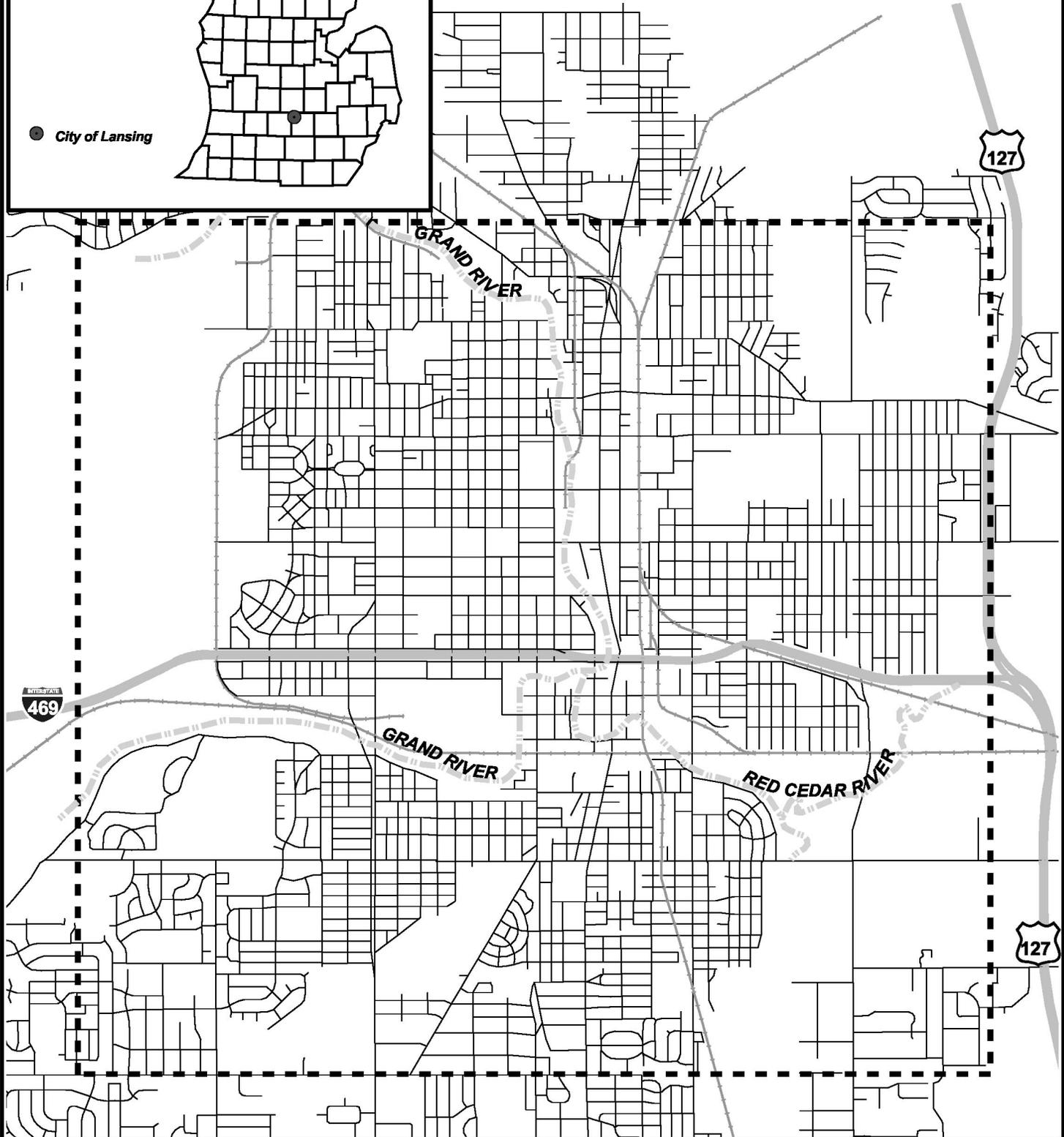
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<sup>2</sup> Readers of this report can find a wealth of primary source material on those subjects in the collections of the Oldsmobile Heritage Center, R.E. Olds Museum, Michigan State Library and Archives, and the Michigan State University Archives.



**Legend**

--- Current Survey



Project # LANATA June 2003

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**Figure 1**  
**Project Boundaries**

**Notes**  
 Parcel map and streets map provided by the City of Lansing Department of Planning and Neighborhood Development.

N

1" = 3,500'

development. The impact and influence of the automobile was consistently cited as a major theme in previous reports, and a key element in the broader historic context of the areas surveyed. The reports thus provided useful background information on the automotive theme in Lansing and, coupled with the materials collected from standard published histories and atlases, they helped orient the survey team to significant trends and patterns that might be encountered in the field. Additional research was conducted at the Capital Area District Library (Lansing), National Automotive History Collection (Detroit), and Michigan State Library and Archives (Lansing) to expand the thematic narrative and establish a context for resource evaluation.

The task of identifying potential survey sites was initially daunting, but background information and lists of auto-related buildings and structures were provided to us by the SHPO and Lansing Planning Office (LPO) staff at the outset of the project. Much of the data was drawn from information that was compiled by volunteers with the LSC board in 1999. The lists generated by that group were the basis for a centralized resource inventory that has since been developed by MotorCities-Automobile National Heritage Area (ANHA) on behalf of its Stewardship Communities. To solicit additional input, the MSG team attended a meeting of the LHD Commission in January of 2003 and made a presentation describing the scope and goals of the project. Open to the general public, the meeting was also attended by invited members of the preservation community, museum and library representatives, and local historians.

The information that was gathered from these sources served as a framework for our investigations, and with it we began to broaden the search for other thematically-associated sites through literature review and archival research. Our most productive tool for that task was provided by the collection of city directories at the Library of Michigan. In five-year increments, we reviewed the classified listings in the directories to identify local businesses or operations that fell within the automotive theme. Naturally, the type of businesses we looked at changed considerably over the forty-year period covered in the survey. In the 1890s, for instance, the training ground for emerging autoworkers were the shops and factories of carriage and wagon makers, blacksmiths, engine builders, founders, pattern makers, machinists, upholsterers, and wheel manufacturers. By 1910 the industries specifically related to the automobile had grown to include gas and gasoline engine manufacturers, automobile body manufacturers, wheel manufacturers, parts manufacturers, and pump and motor manufacturers. A lively sales and service industry was born soon thereafter, and included auto parts and accessories, auto painting and enameling, auto dealers and sales agents, service stations, gas stations, tire and radiator repair, auto wrecker service, battery storage, and garages. By 1930 the businesses that supported or grew out of auto manufacture also included oil companies, truck and road machine manufacturers, tool and die manufacturers, screw machine products, and auto rental and hauling.

Based on our research, and combined with the information provided by the friends of this project, we created a list of approximately 450 sites that fell within the project timeframe and were associated with the auto industry through some retail, service or production capacity. Using that list, we began the task of verifying the presence of those buildings and recording them. Given the unexpected number of properties identified and the constraints of time and budget – and with the concurrence of the SHPO and LPO – our survey methods followed these general guidelines:

- All 450 sites were field-checked, and all extant buildings were included in a list of thematically-associated buildings;
- Buildings that exhibited a significant loss of physical integrity were photographed, but the photos were not digitally scanned, and the sites were not recorded on inventory forms;
- For previously-recorded sites (included either in the SHPO inventory or the ANHA database), additional research and documentation was not conducted and inventory forms were not typically generated; and

- Buildings related to the automotive theme solely through a minor retail function were not recorded unless they were exceptionally well-preserved or rare examples of the type.

Within these general parameters, the survey team was able to locate and photograph approximately 105 historic properties (see Appendix A). Sites meeting the minimum criteria for recordation were systematically photographed (35 mm color negatives) and located on parcel maps provided by the LPO, and relevant physical attributes and features were noted. Field survey was conducted primarily from the public right-of-way.

In March of 2003, we met with the SHPO and LPO to review the field results, and to select the properties of significance to the Lansing Stewardship Community that merited additional study. At that time, fifty-two sites (comprising sixty individual resources) were deemed to have significant automotive associations and sufficient historic integrity to convey those associations, and a formal inventory of those properties was initiated soon thereafter. For budgetary reasons, the research effort was adjusted so that all identified properties were recorded at either the reconnaissance or intensive level.<sup>3</sup> Attached in Appendix B is a general area map showing the location of these properties, with a key to additional detailed views.

For all properties, our research was initially conducted at the reconnaissance level using general references and readily-available public records as a source. For properties that clearly demonstrated a high level of historic significance or architectural integrity, the research effort was intensive. At this level, city directories helped elaborate the properties' history of occupancy and usage. Realty records, photographs and product literature from the local history collection at the FPML/CADL were accessed, and tax and permit data was collected from original inspection cards in the City Assessor's office to document the features and condition of subject properties over time. With this, we were able to begin the task of recording property-specific data and developing a historic overview and thematic narrative.

All survey information was entered into a transferable database system using the RUSKIN format, and was printed on standard survey forms following the format required by the SHPO (see Appendix C). Survey data was also entered into the centralized resource inventory created and maintained by MotorCities-ANHA. This interactive web-based resource inventory – which currently includes approximately eighty-three cultural and historic resources in the Lansing area – is accessible to the general public through the ANHA website at [www.autoheritage.org](http://www.autoheritage.org).

Using the thematic narrative we developed on the early history of Lansing's automotive industry, and the results of our field studies, the historic significance of the surveyed properties was assessed using the National Register Criteria for Evaluation (36 CFR 50.4), the established criteria for evaluating the eligibility of properties for inclusion in the national register. Under current federal regulations, an historic resource may be determined to be eligible for listing under one or more of the following criteria:

*The quality of significance in American history, architecture, archaeology, engineering, and culture is present in the districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*

- (a) *That are associated with the events that have made a significant contribution to the broad patterns of our history; or*
- (b) *That are associated with the lives of persons significant in our past; or*

---

<sup>3</sup> The number of sites identified as potentially significant exceeded the amount estimated and budgeted for this project.

- (c) *That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- (d) *That have yielded or may be likely to yield, information important to the prehistory or history.*

These evaluations resulted in one of three recommendations. A property maintaining its physical integrity might be recommended as *eligible* for National Register listing under one (or more) of the four criteria listed above. For lack of physical integrity, or where historic associations within the automotive theme were weak, a property was determined to be *not eligible* for listing. In cases where the integrity of the resource was intact and there was potential for historic significance that was not revealed at this level of research (primarily at the reconnaissance level), the recommendation was to pursue additional study (*more data needed*); the same recommendation was also offered in cases where the building was historically significant, but its physical features were not clearly evident and interior access was unavailable. It should be noted that, although initial findings were presented in draft form to the SHPO and LPO staff, the final recommendations contained within this report represent the professional opinion of the consultant team only. Those recommendations are presented in graphic form on Table 1, with additional discussion provided on pages 70 - 80 in this report.

**TABLE 1  
SUMMARY DATA AND RECOMMENDATIONS**

<b>BUSINESS</b>	<b>ADDRESS</b>	<b>PARCEL NO</b>	<b>ELIGIBILITY</b>	<b>ANHA #</b>
Charles Blades house	230 Butler S	33-01-01-17-428-191	Eligible	485
Ray Potter house	1348 Cambridge	33-01-01-19-426-011	Eligible	
Harry Harper house	1408 Cambridge	33-01-01-19-428-001	Eligible	1118
Dean & Harris	1127 Cedar N	33-01-01-09-426-051	Eligible	1224
Standard Oil Company bulk facility	410 Cedar S	33-01-01-16-476-002	Eligible	
Wolverine/Cities Service Oil Company	711 Center	33-01-01-09-452-031	Not Eligible	1214
Raymond Chevrolet Sales	1213 Center	33-01-01-09-257-193	Eligible	1215
Elmer Dail house	1204 Genesee N	33-01-01-17-204-110	Eligible	1217
Ernest Dail house	1306 Genesee N	33-01-01-17-202-161	Eligible	1219
Lansing Commercial Body Company	116 Grand River E	33-01-01-09-401-101	NR Listed	1221
Bates-Wohlert Company	708 Grand River E	33-01-01-10-301-013	More Data Needed	520
Capitol Heights Filling Station	1223 Grand River E	33-01-01-10-181-261	Eligible	1223
Pulver Brothers Filling Station	127 Grand River W	33-01-01-09-331-001	Eligible	1216
James Seager house	533 Grand S	33-01-01-16-456-021	Eligible	484
Duplex Truck Company	732 Hazel E	33-01-01-22-151-003	Not Eligible	498
Lansing Motor & Pump	326 Hosmer S	33-01-01-15-309-102	Eligible	603
Michigan Screw Company	506 Hosmer S	33-01-01-15-351-051	Eligible	1226
Dail Steel	1000 Hosmer S	33-01-01-22-103-021	Not Eligible	1242
Hugo Lundberg house	1701 Jerome	33-01-01-15-276-081	Eligible	1227
Harris Thomas house	1712 Jerome	33-01-01-15-280-241	Eligible	1228
Whiteley Peerless Sales	731 Kalamazoo E	33-01-01-15-307-002	More Data Needed	
Kramer Company	800 Kalamazoo E	33-01-01-15-352-002	More Data Needed	1231
Liberty Garage	810 Kalamazoo E	33-01-01-15-352-342	More Data Needed	1232
Root's Garage	812 Kalamazoo E	33-01-01-15-352-331	More Data Needed	1234
Square Deal Auto Body Company	826 Kalamazoo E	33-01-01-15-352-302	More Data Needed	1233
Fleming Motor Sales Company	112 Larch N	33-01-01-16-277-152	More Data Needed	1236
Forncrook Automotive Supply Company	124 Larch N	33-01-01-16-277-142	More Data Needed	1238
H & H Body Company	130 Larch N	33-01-01-16-277-123	More Data Needed	1239
Roxanna Gas Station	401 Larch N	33-01-01-16-228-191	Eligible	1243
Gier Pressed Steel	1508 Larch N	33-01-01-10-105-001	Eligible	1240
Federal Drop Forge	2807 Martin Luther King Blvd S	33-01-01-29-426-151	More Data Needed	1270
Lindell Drop Forge	2830 Martin Luther King Blvd S	33-01-01-29-401-033	More Data Needed	1235
Allen Sparks Gas Light Company	418 Michigan E	33-01-01-16-426-052	Not Eligible	1246
Peez Oil Corporation	614 Michigan E	33-01-01-16-428-061	Not Eligible	1245
Abel Motor Sales	726 Michigan E	33-01-01-15-302-001	Eligible	1247
Aaron DeRoy Motor Car Company	827 Michigan E	33-01-01-15-155-062	Not Eligible	1248
Atlas Drop Forge	209 Mt. Hope W	33-01-01-28-103-093	Eligible	496
Schaible Gas Station	220 North E	33-01-01-09-252-221	Not Eligible	1259
New Way Motor Company	704 Oakland E	33-01-01-10-351-283	Not Eligible	497
Novo Engine Company	705 Oakland E	33-01-01-10-305-012	Eligible	1250
Novo Engine Company	700 Porter	33-01-01-10-305-002	Eligible	601
Cady and Hildreth Company	1131 Race	33-01-01-09-402-013	NR Listed	1252
Jarvis Engine & Machine Works	905 River	33-01-01-21-230-003	Eligible	1253
Prudden Wheel	725 Saginaw E	33-01-01-10-353-005	Eligible	489
Hugh Lyons & Company	701 South E	33-01-01-22-151-111	Not Eligible	588
B.S. Gier house	301 Sycamore N	33-01-01-16-151-051	Eligible	1256
Melling Forging Company	1709 Thompson	33-01-01-09-203-052	Eligible	
Turner Street hack barn	1224 Turner	33-01-01-09-257-041	NR Listed	
Central Garage	1122 Washington N	33-01-01-09-401-021	More Data Needed	1263
S & K Garage	1125 Washington N	33-01-01-09-331-162	Not Eligible	1264
Standard Oil Company filling station	1501 Washington S	33-01-01-21-402-002	Eligible	1265
Duplex Truck	2100 Washington S	33-01-01-28-151-003	Eligible	498

## **HISTORICAL OVERVIEW**

Prior to 1815 south central Michigan was only thinly settled because of forays into the area by Native Americans and rumors that the soils were not fertile. The Battle of Fallen Timbers (1794) in northwest Ohio demonstrated the military superiority of the United States over the Miami, Shawnee, Delaware, and Wyandot coalition, and resulted in the Treaty of Greenville (1795). After the treaty was signed, the region was effectively opened up for settlement. However, permanent American settlement did not gather momentum until the War of 1812 removed British support for Native American raids and harassment. After the war, and by the terms of several treaties, the Wyandot, Ottawa, Shawnee, Delaware, Seneca, Potawatomie and Chippewa ceded all remaining lands in the region, except for specified reservations, to the U.S. government. In 1830 the federal Indian Removal Act was enacted to exchange all Indian holdings east of the Mississippi River for western lands. The last of the reserves was forfeited by 1842.

In the early 1800s canal fever gripped much of the northeast and Great Lakes regions, as the Erie Canal demonstrated the viability and stimulation to commerce such infrastructure provided. The canal provided easy access to the Great Lakes and Michigan. This access inaugurated a settlement boom that extended all the way to what would become the city of Lansing, but in the early 1800s was merely a small clearing along the Grand River in what would become Ingham County.

### **Exploration and Settlement**

The original and current routing of some roads leading to Lansing served as important travel routes for Native Americans long before the first Europeans arrived. The Grand River Trail was an important travel route and a link to the outside world for settlers. The first settler at this location, John Burchard, built a cabin and dam at the river in 1843, while James Seymour arrived in 1846 and built a house and sawmill. First named Michigan, the settlement was renamed Lansing in 1849. The settlement grew steadily and achieved city status with a population of 4,000 in 1859. Even at this relatively early date, Lansing was home to a core of industry, including iron foundries, machine shops and mechanic shops. These shops and the city's residents were divided into three discrete clusters: Upper Town, Middle Town, and Lower Town.

Lower Town comprised the original settled portion of the city.<sup>4</sup> Middle Town grew up near the present location of the state capitol building, while Upper Town was situated near the confluence of the Grand and Red Cedar Rivers. For a time, Lower Town was a thriving commercial-industrial center. With the selection of Lansing as the state capitol in 1847, however, there was a gradual transition in status and influence from Lower Town to the Middle Town area around the capital center.

The state capital was established at Lansing by the state legislature in 1847. It was believed that building the capitol in such an isolated location would remove legislators from the graft, corruption and "evil influences" that characterized other urban centers. Lansing was not certain it would remain the state's capital until a substantial capitol building demonstrated its commitment to the town. The current capitol building was completed in 1879. The state legislature maintained a part-time schedule, and in the late nineteenth century held a five-month session biannually. Other state officials traveled to Lansing only when needed. These were citizen legislators who mixed readily with Lansing residents and frequented the city's shops, restaurants and rooming houses. Into the twentieth century, the actual number of state employees remained small and there was little need to construct many state buildings.

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<sup>4</sup> Parts of Lower Town are included in the North Lansing Commercial District, which was listed in the National Register in 1976.

The selection as state capital helped encourage population growth in Lansing. The village had only 88 occupants in 1840, but by 1850 (after it became the state capital) it had grown to 1,556 people. In 1860 and 1870, the population more than doubled each decade, to 3,582 and 7,445, but growth slowed during the decade of the 1880s, increasing only to 8,313. The influence of a growing industrial economy and the jobs it offered is reflected from the 1890s through 1950. Initially the steady growth raised the population to 13,102 in 1890 and 16,485 at the turn of the century. The growth accelerated in the following decades, largely spurred by the emergence of the automobile industry and associated second-tier suppliers. Population nearly doubled to 31,229 in 1910, and again to 57,327 in 1920, which is also the largest absolute population increase by the city of any decade. As Lansing's auto industry expanded, the city's population grew to 78,397 in 1930, but growth slowed during the Depression, as revealed by the 1940 figure of 82,796. Momentum resumed in the post war period, reaching a population of 92,129 in 1950.



*Plate 1: E. Bement & Sons, 1889*

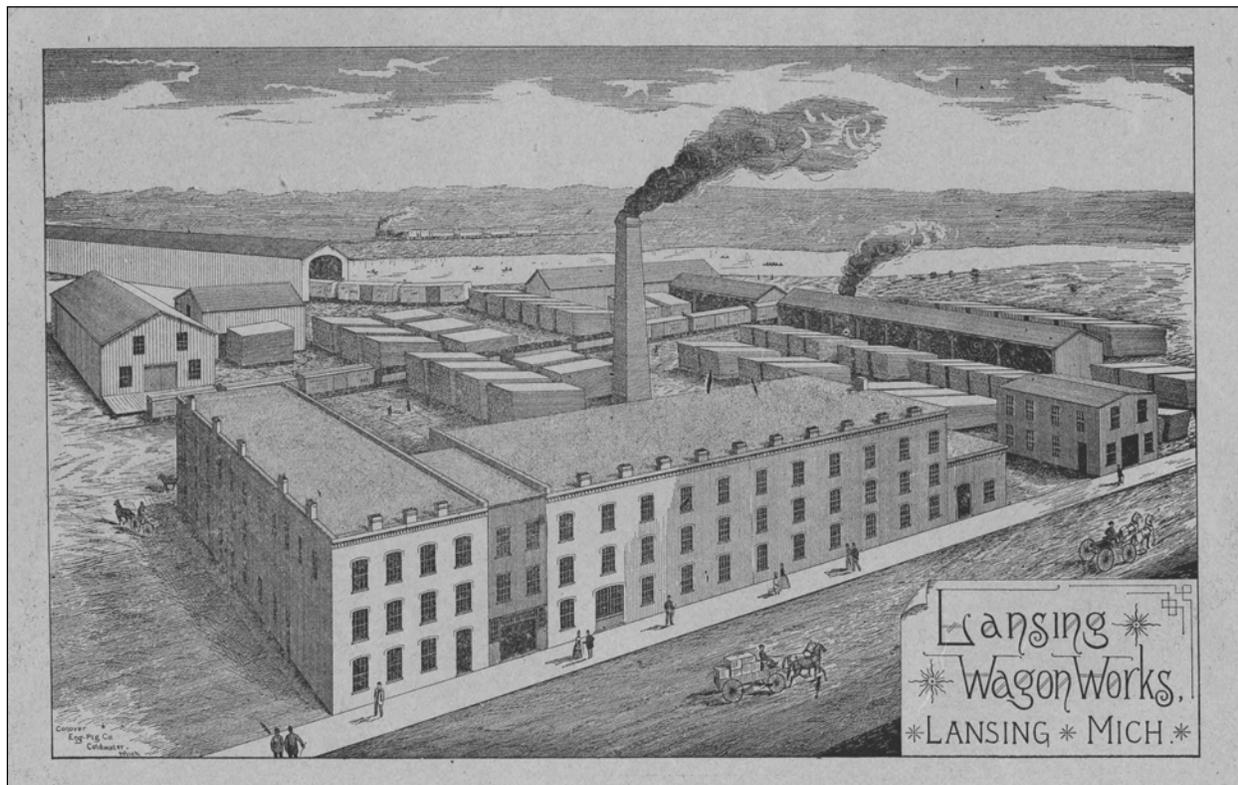
### **Early Industrial Era**

Since the first arrival of permanent white settlers, the Grand River has always been a focus for industry in Lansing. The earliest small shops clustered along it, and manufacturers of various types and sizes continued to locate along its banks until the early 1900s.<sup>5</sup> Virtually all of these shops and small businesses were family owned and depended on local business to survive. Plows, wagons, and stoves were some of the earliest products manufactured in the city. Through the second half of the nineteenth century Lansing's industrial base grew in tandem with the growth of mechanization and improved transportation. Better roads and the expanding railroad network also allowed firms to grow because they could now access larger regional and national markets. As a result, industry ceased to be family-based and was generally controlled by impersonal stock companies and investors. Throughout this evolution the Grand River continued to be a magnet for industrial development.

By the 1850s, the railroad enabled Lansing to develop the foundation that would lead to its industrial and commercial growth. The first railroad to reach Lansing was the Amboy, Lansing & Traverse City (Lansing & Howell) Railroad in 1853. This was soon extended to the Detroit & Howell Railroad, which thereby allowed Lansing citizens continuous travel to southeast Michigan and Detroit. The Jackson & Lansing Railroad reached Lansing in 1864 and, after several mergers, was incorporated into the Michigan Central Railroad. Other railroads linked the city more closely into the national economy, including the Detroit, Lansing & Lake Michigan Railroad and the Chicago & Lake Huron Peninsular Division in 1869, followed by the Grand Valley Railroad in 1870, and the Northern Central Michigan Railroad in 1873. Thus, by the mid-1870s Lansing was anchored firmly into the national railroad grid, laying the framework for industry and commerce in the coming decades. Between 1865 and 1875 the number of wagon

<sup>5</sup>Between 1900 and 1920, most new industrial growth was concentrated along the city's fringes, in undeveloped areas where large tracts of land were still available. That fringe area roughly corresponds to the boundaries established for this study, and includes most auto-associated industries established before 1930.

manufacturers and other industrial concerns in Lansing grew as the railroad offered access to national markets and provided raw materials in a rapid and cost-effective manner. The developing diversified economy would play a significant role in the local, state and regional economy.



*Plate 2: Lansing Wagon Works, 1889*

Lansing was well situated to develop into an industrial center, especially given its strategic location on the maturing late nineteenth-century railroad grid. This factor allowed the consistent and cheap import of raw materials that were used to manufacture finished products, which were in turn exported to consumers along the same reliable railroad grid. Foundries and machine shops were among the leading first industries in Lansing, with over a dozen businesses of that type listed in city directories in the late-1860s. The first major industry of this kind was E. Bement & Sons, manufacturer of agricultural implements, stoves and sleds. Following a post-Civil War agricultural boom, Bement & Sons expanded as the national market for their products matured, and by 1885 they were Lansing's largest industrial firm, employing between 700 and 800 workers. Another common type of industry in Lansing was carriage builders and wagon works, which would position the city for its evolution into a center of the automobile industry beginning in the early twentieth century. Clark & Company and Lansing Wagon Works were the leaders in this sector. Also prominent in this area of production was the Lansing Wheelbarrow Company.<sup>6</sup> Founded in 1881, the company employed 400 workers to produce 10,000 wheelbarrows a year in 1890. By the early twentieth century it was the country's largest maker of wheelbarrows. Windmill manufacturers Rork Brothers and Maud S. Windmill & Pump Company also rose to prominence at this time, the latter claiming to be the second largest of its kind in the nation.

These industries formed the industrial environment from which the automobile industry in Lansing developed. Their founders were competitive businessmen skilled in industries that would form the basis of automobile manufacturing. The small firms would compete, merge and grow as the demand for their

<sup>6</sup> Later known as The Lansing Company, it converted to truck and auto-related business after 1900.

products increased. Sensing the potential for further expansion, successful businessmen willingly reinvested their profits in their plants and in other industries in Lansing. When the Oldsmobile Motor Vehicle Company was formed in 1897, for instance, six of the seven investors backing it were residents of Lansing. When there was a danger that Oldsmobile would be lost forever to Detroit, the Lansing Businessmen's Association acquired the Lansing fairgrounds to offer Ransom E. Olds as an inducement to return to central Michigan after his Detroit factory was destroyed by fire, which he did in 1901.

The combination of a central location, good rail transportation, and the human component of civic boosterism were strong factors in Lansing's industrial growth and success. In the late nineteenth and early twentieth century many in the city claimed its unofficial motto to be "Lansing is an Industrial City." Because the city produced much of its product from iron (foundries, agricultural implements, steam engines, pumps, and various other machinery) one city booster proclaimed "we are living in an iron age." To attract more industry, the city and its boosters advertised extensively and offered free land to businesses that located there.

By the late 1800s, Lansing industries were producing wagons, carriages, sleighs, garden tools, boots and shoes that were distributed throughout the United States. Farm industries also developed around the city, resulting in the raising of cattle, horses, sheep, hogs, poultry, and bee keeping. By 1890, there were seven railroad companies in town. At the close of the nineteenth century, Lansing's population was 25,180, while Ingham County's population was 48,222.<sup>7</sup> Lansing had become an industrial and transportation center.

As Lansing's auto industry grew, additional workers were needed and the expanding service industry, growing with the city's population, required more staff. Jobs were plentiful in Lansing, attracting people from different places and cultures who came by steamer, train or automobile. Many traveled to link up with family members already here. African Americans came from the south, surging northward to take advantage of employment opportunities, primarily in the service industry.<sup>8</sup> Most Mexican Americans came by car from the Texas area, many starting as migrant workers and then moving into industrial positions such as foundries and forges as circumstances permitted. Each group clustered in their own neighborhood, joined ethnic organizations, and followed cultural lifeways. Different peoples all came in search of the same thing: steady work, steady income, and opportunity for their children.

## **The Industrial Years**

By the twentieth century, Lansing had developed notoriety in its primary manufacturing industries. The October 14, 1904 issue of the *Detroit Free Press* featured Lansing under the title "Remarkable Growth" and "Lansing Shows it in its Manufacturing Interests," describing it as the fastest-growing city in the state. In the article many numbers were provided to demonstrate Lansing's boom economy. For example, in the four-year period commencing in 1900, the number of manufacturing plants increased by nearly one-third, wages and employee output were each up 100% or more, and capital investment was up 191%. In the middle of the first decade of the twentieth century Lansing was home to a number of nationally renowned businesses: E. Bement & Sons was the largest producer of bobsleighs in the world; Olds Motor Works produced the most automobiles nationally; and Lansing Wheelbarrow produced the second highest number of wheelbarrows in the United States. The Olds Gasoline Engine Works was the largest producer of engines that ran exclusively on gas; Hugh Lyons & Company manufactured the largest number of store fixtures and show cases; Maud S. Windmill Company was the country's largest manufacturer of windmills, tank heaters, pumps and tanks; and W.K. Prudden & Company emerged as the largest producer of automobile wheels in the nation. In some instances, the city and its local industrial

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<sup>7</sup> 1900 U.S. Census

<sup>8</sup> Industrial positions did not readily open up to African-Americans until the post-World War II labor shortage.

leaders combined to demonstrate their progressive nature and achieve publicity for both. Thus, in 1908 the City of Lansing took ownership of the nation's first motorized fire truck – a pumper installed on an Oldsmobile chassis. Fire departments from across the country traveled to Lansing to view this state-of-the-art equipment.

Industrial figures provide an accurate view of Lansing as it emerged from a small shop industrial base to one of large manufacturing concerns. In 1880 the amount of wages paid was \$235,000 and the value of manufactured goods produced was \$1,596,000. By 1890 wages reached \$1,033,000 and value produced \$3,927,000. Most illustrative of the explosive industrial growth, in 1910 the value of manufactured products for Lansing industries was \$7,765,000, and only a decade later this figure climbed to \$104,722,115.

The first gasoline automobile was produced in Lansing in 1896 by Ransom E. Olds, and by the twentieth century the city had moved deep into automobile territory. The Olds Motor Works opened in 1897 and produced the first popular affordable automobile. R.E. Olds left Olds Motor Works after a dispute with company executives and founded the Reo Motor Car Company in 1906. Reo was known for its reliable automobiles until the 1930s, when it switched to the production of dependable trucks. By 1910 there were several different auto manufacturers in the city, and the automobile and its support businesses developed into Lansing's leading industry.

Between 1900 and 1910 the population of Lansing nearly doubled, increasing by over 15,000 people. This rapid growth occurred in tandem with the expansion of the automobile and automobile support industries in the city. A good part of Lansing's prosperity was arriving by way of the railroads. Passenger trains brought new laborers for the factories, while freight trains brought the necessities of manufacturing into Lansing and carried away the finished products to market. The modernization of the factory system created more employment positions as the manufacturer became more efficient and the product became more affordable to the public. The numerous job openings created opportunities not only for Lansing residents, but also for others newly arrived in the city, including immigrants from Europe. Foreign-born Lansing residents rose from 1,286 in the 1880 census to 3,973 – or nearly 15% of the city's population – by 1910. The predominant immigrants to arrive were of German, Irish, English and Polish descent and provided support to the county's thriving businesses, including the auto industry.

By 1910, Lansing had acquired a national reputation for its manufacturing industry. This industry served as a good public citizen, with owners returning a portion of their profits through good works. James Henry Moores, for instance, donated Moores Park along the Grand River in 1909, as well as Frances Park (named for his wife) in 1918.<sup>9</sup> William Durant donated Durant Park along Capitol Avenue in 1921. Specialty and support industries for automobile production were the fastest growing segment of the Lansing economy. These were start-ups as well as extensions of existing businesses. Key figures in their development were both entrepreneurs newly arrived to Lansing, and businessmen who had already claimed Lansing as their home town. Typical is the Michigan Screw Company, which was founded by R.E. Olds in 1906 to support his burgeoning automobile production.

Lansing met World War I with typical patriotic fervor. Its residents, businesses and industries combined to do their part. Numerous Lansing factories, from large to small, produced war material, not only for the United States but also for allied countries in Europe. While some found it difficult to maintain business as usual as regular markets were disrupted and workers enlisted, other companies found the war to be a

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<sup>9</sup> In the 1880s, J.H. Moores made his first fortune in the lumber business. In 1906 he moved to Lansing, where he invested heavily in local real estate and business. During his lifetime, he was president of the Lansing Stamping & Tooling Company, the Lansing Foundry Company, and the Lansing Connecting Railroad, as well as founder of the Lansing Wheelbarrow Company and director of the Atlas Forge Company.

boon for business. For example, the Reo Motor Truck Company prospered from an order by the U.S. Army to provide 3,000 trucks. Reo also provided vehicles to the French and English armies.

After the war, life in Lansing returned to normal. Industrial plants continued to expand and the demand for labor remained constant. The combination of returning veterans and the recruitment of new workers caused an acute housing shortage. Some factories declared they could no longer continue to expand because there was a shortage of worker housing. In response, developers and real estate firms platted new neighborhoods, encouraged and supported by the city's captains of industry. *The Lansing Journal* responded with a nine-day "Own Your Own Home" campaign in April of 1919<sup>10</sup> and local real estate firms directed potential purchasers into blocks of newly constructed housing on the outskirts of town. Among the working class subdivisions developed during this period were Park Heights, Moore's Park, Quentin Park, and Greencroft, all of which were oriented to the auto industries on the south end of the city. For white-collar workers and managers, the Espanore and Westmoreland subdivisions were attractive and convenient alternatives to downtown living.

Housing for the working classes was not always in adequate supply during much of Lansing's industrial and population expansion through the decades. However, larger, more stylish residences for the successful businessmen and other members of the upper class were built when needed and as desired. Many of the larger and more opulent examples of this type of housing were designed by local architects such as Darius B. Moon, who demonstrated the breadth of his skills by also working on the Olds Motor Works, Atlas Drop Forge, and the Michigan Screw Company buildings.<sup>11</sup>

Selected plats in northern Lansing gradually emerged as prestigious neighborhoods during the early twentieth century. Many of the city's most prominent businessmen and industrialists bought lots there and commissioned architects to design large and stylish homes. Among the more prominent examples are the George Bohnet house at 601 N. Capitol and the William Newbrough house at 615 N. Capitol, designed by Lansing architect Samuel D. Butterworth. However, wealthy residents were also likely to be found well removed from the north side, scattered across peripheral city blocks. The Ransom E. Olds mansion (720 S. Washington) was another elegant house built for perhaps the most significant industrialist in Lansing history by Darius Moon. Associated with the city's premier automotive figure, the Olds residence was demolished in 1966, somewhat ironically, to make way for the Olds Freeway.<sup>12</sup>

### **Maturation of Industry**

The appearance of the city continued to evolve as population and prosperity increased. Infrastructure improvements that included the extension of paved streets into neighborhoods were welcomed by local residents. Lansing was developing a classic downtown and achieved the image of a true metropolis with the construction of ever larger commercial and office buildings, sometimes with the support of local industrial leaders. An example is the Olds Hotel (111 S. Capital Avenue), which was built in 1925-26 by a group of financiers led by R.E. Olds.<sup>13</sup> Designed by the nationally renowned architecture firm of Holabird & Roche of Chicago, the hotel was thirteen stories tall and contained 300 rooms. The twenty-six story Olds Tower (130 W. Allegan) was also financed by a group of businessmen led by Olds. Constructed in 1929-30, it was reputed at the time to be the tallest building between New York and Chicago.

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<sup>10</sup> The campaign became a regular feature of the *State Journal*, appearing in editorials and advertising supplement for months beyond the initial nine-day effort.

<sup>11</sup> Darius Moon (1851-1938) was one of Lansing's most prolific architects at the turn of the twentieth century. He was principally known for his residential design, but is credited with major industrial and institutional projects as well.

<sup>12</sup> Some architectural artifacts from the Olds home are currently held by the Michigan Historical Museum in Lansing.

<sup>13</sup> Now known as the George W. Romney State Office Building.

By the time the Great Depression had arrived, Lansing was experiencing economic hardships similar to the rest of America. There was a thinning out of the weaker companies during the early 1930s and, as automobile sales fell, unemployment rose to record levels and income plummeted. Some companies ceased to exist and others tried dramatic changes to survive. During this time, the Durant Motor Works fell into bankruptcy in 1931, while Reo ceased producing automobiles and after 1935 produced only trucks.

As weaker companies went bankrupt, the remaining companies were in a better position to incorporate their revenues and sales. Some companies such as Olds Motor Works and Reo Motor Company were still able to provide men and vehicles to assist with the general relief efforts. Still, belt-tightening was necessary and Reo was forced to end the company-sponsored fall “fairs” that had grown into a city-wide event, as well as the *Reo Spirit* magazine, speakers, and other paternal efforts at maintaining good will with its employees. This paternalism was not always successful, however, as Reo employees staged a month-long sit-down strike in March 1937 to protest firing of some employees and wage reductions for others.

### **World War II to 1950s**

With the advent of World War II, auto plants, machine shops, and other factories in Lansing again converted to wartime production. Men who went to war were replaced on assembly lines by women. Scrap drives and blood drives were always well-attended, as citizens did their part on the Home Front to support the war effort. For those at home during the war, national defense contracts fostered greater prosperity, profits and employment.

The contracts offered by the government to produce war material preserved and strengthened Lansing’s industrial sector, which was still slowly emerging from the Depression. Their involvement in wartime production was much more extensive than during World War I. Motor Wheel produced armor piercing shot; Oldsmobile provided ammunition, cannons, aircraft guns, forgings for guns and vehicles and aircraft engine parts; Fisher Body made bomber parts; Atlas Drop Forge produced tank parts; and Lansing Paint manufactured materials for explosives.

After the war, returning veterans wanted their old jobs back as well as decent living accommodations. This resulted in an explosive period of construction that was second only the 1920s boom, creating new plants and housing subdivisions in the burgeoning suburbs around Lansing. The popularity and accessibility of the automobile further encouraged suburban development. County residents, in search of accessibility to work in neighboring communities, could escape congestion in outlying areas.

As the dust settled and life returned to normal, employment was available from the three primary sectors of the city’s economy: industrial, administrative and commercial. The significance of the automobile industry to Lansing and its residents is revealed by the fact that during this period 20-25% of those employed in the city were working in automobile factories. In addition, one-half of the city’s factories were engaged in metal processing, and 30% of Lansing’s plants were directly related to the auto industry.

## THEMATIC NARRATIVE

The earliest development of the automobile can be traced to European inventors, mechanics, engineers and businessmen who had solved the basic problems of powering a vehicle with an internal combustion engine by the 1880s.<sup>14</sup> Within the United States, the Duryea brothers furthered the development of the vehicle with their successful gasoline-powered automobile (or motor wagon), which was first driven in Springfield (MA) in 1893. Other pioneering efforts quickly followed: Daimler Motor Company of Long Island (NY) exhibited the only gasoline-powered vehicle at the 1893 Columbian Exhibition in Chicago; Elwood Haynes of Kokomo (IN) completed his horseless carriage in 1894; and Alexander Winton of Cleveland (OH) achieved his first success in 1896.

In Benton Harbor (MI), carriage makers Albert and Louis Baushke tested their first self-propelled vehicle in 1896. Although the Baushke brothers announced that they intended to manufacture motor carriages full time, their first product was deemed a failure due to an engineering oversight where the engine lacked an adequate lubrication system. The first Michigan success was instead marked when Charles B. King drove his gasoline-powered “road carriage” on Woodward Avenue in Detroit on March 6, 1896. That same year another Detroitier, Henry Ford, made his first successful run in the quadricycle he designed and built. In Lansing, Ransom E. Olds was also experimenting with automobiles. After his first two attempts utilizing steam engines, Olds created a successful automobile powered by an internal combustion gasoline engine in 1896.

These early automobile successes usually led to the formation of a fledgling company that produced a limited number of vehicles for sale to the public. An example is the Duryea Motor Wagon Company, which only produced thirteen vehicles before dissolving over ongoing disputes between brothers Frank and Charles. In other cases, companies were formed but never actually put a vehicle into production. Working with the Apperson brothers in Kokomo, for instance, Elwood Haynes was still unable to get an automobile into production by 1897, three years following his initial success.

### **Michigan’s Automobile Industry Begins in Lansing**

Following R.E. Olds’ 1896 success, he began producing a four-seat, four-wheeled “Motor-Cycle” that was sold to the public for \$1,000. Production of the vehicle began in the Lansing shop of P.F. Olds & Son, the already well-established engine concern that was founded by his father, Pliney F. Olds. As orders for the new automobile began to flow in, the resources and the facilities of the parent shop became strained as the demand continued for their engines, the firm’s original and primary product. Looking for capital investment to expand the vehicle manufacturing operation, Olds turned to Edward W. Sparrow, one of the principal owners of the successful Lansing Wheelbarrow Company. On August 21, 1897, the Olds Motor Vehicle Company was formed exclusively for the purpose of “manufacturing and selling motor vehicles.” Although a similar announcement had been made twenty-one months earlier by the Benton Harbor Motor Carriage Company, the Olds venture was the first automobile company actually formed in Michigan.<sup>15</sup>

Olds Motor Vehicle Company’s fairly limited production continued in Lansing for the next two years as R. E. Olds continued to seek investors to further expand the company’s operations. The next significant influx of money came from Michigan copper and lumber magnate Samuel L. Smith. As the automobile manufacturing industry was still not proven to be an entirely safe financial venture, Smith sought to

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<sup>14</sup> George S. May, *A Most Unique Machine: The Michigan Origins of the American Automobile Industry*, (Grand Rapids, Michigan: William B. Erdmans Publishing Company, 1975), p. 16.

<sup>15</sup> Despite the grandiose plans put forth by the Baushke brothers, they ultimately failed to produce a single automobile

protect his investment by insisting that the reorganized company include the already proven and profitable Olds engine works.

The new company, formally organized in May 1899 as Olds Motor Works, continued operations in Lansing while beginning the process of securing a site for the company's next phase of expansion and permanent location. Actually, that process had already begun before the official formation of the new company. Site offers came in from Chicago, Toledo, Cleveland, Indianapolis, Buffalo, and Muskegon, but in April 1899 discussions centered on possible Detroit locations. Within a week after incorporation, the new company announced the purchase of five acres of land along the Detroit River. Generally accepted reasons for the company's move to Detroit include the number of skilled workers that would be readily available, proximity to suppliers, and access to shipping facilities. Additionally, the new company's largest shareholder, Samuel L. Smith, resided in Detroit, a fact that, in all likelihood, may have driven the final decision. Regardless, the Olds Motor Works plant was open in Detroit by the end of the year, although operations continued at the engine plant in Lansing.

With the infusion of capital, a new plant, and a workforce in place, production began at the Detroit facility, but was now limited by product development and Olds' apparent indecision about what kind of car to produce. Olds experimented with

approximately eleven different models ranging in price from \$1,200 for a two-passenger model to \$2,750 for a four-passenger brougham.<sup>16</sup> None of these models generated much public interest and sales lagged. By the fall of 1900 the automotive division of the Olds Motor Works was \$80,000 in the red, with the entire company being supported by the continued sales of the Olds engines.<sup>17</sup>

Olds finally arrived at the concept of a lightweight, inexpensive runabout that was similar to others already offered by other companies. His model featured a one-cylinder gasoline engine and weighed only about 600 pounds. The vehicle initially sold for \$600. The most distinctive feature of the new model was a curved dash that was available, along with the more standard flat front dash. This was the first vehicle R.E. Olds produced that would be called an Oldsmobile. By the start of 1901, the company promoted this model at the near exclusion of their earlier offerings. The distinctive look of the vehicle, the simplicity of operation, and the lower price quickly caught the public's attention. By March over 300 orders had been received for the Curved Dash Oldsmobile.

Even before production of the new model runabouts could begin (and the company could begin to work itself out of financial distress), another setback occurred when most of the new Detroit plant was destroyed by fire on March 9, 1901. Production was only delayed, however, as major components of the

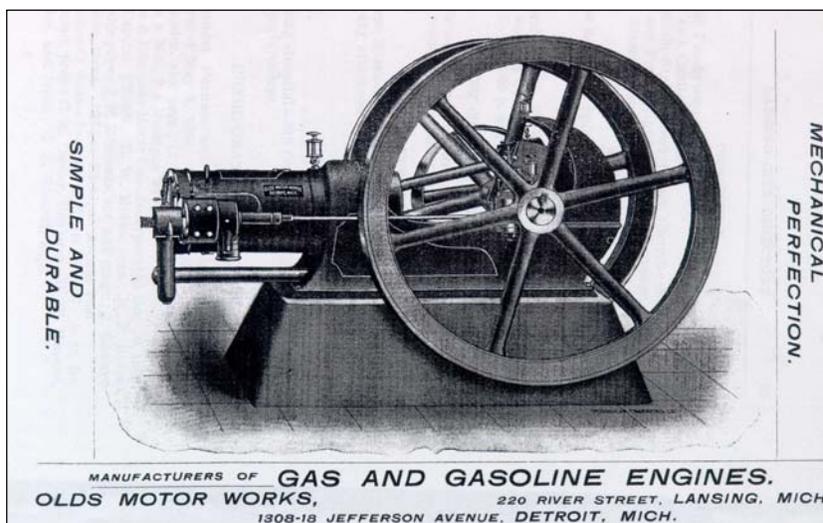


Plate 3: *Olds Motor Works advertisement, 1900*  
*Detroit and Lansing plants both listed*

<sup>16</sup> Willis F. Dunbar and George S. May, *Michigan: A History of the Wolverine State*, (Grand Rapids, Michigan: William B. Erdmans Publishing Company, 1995), p. 422.

<sup>17</sup> *Ibid.*, p. 432

vehicle were produced by outside suppliers and vehicle assembly could continue in makeshift quarters in what remained of the factory. Within one month following the fire the first of the runabouts were being delivered, and by the end of 1901 about 600 had been produced and sold.

In the wake of the fire, and in an effort to attract the company back to their city, the Lansing Businessmen's Association offered the Olds Motor Works a fifty-two acre site south of the city. The company accepted the offer, constructing a new plant in Lansing as well as rebuilding the fire-damaged Detroit facility. For the following few years Oldsmobiles were produced in both Detroit and Lansing, but by 1905 all production activities were returned to Lansing. R.E. Olds' involvement with the company bearing his name would end around 1904 with his resignation.<sup>18</sup> Later that year he would establish another major Lansing automobile manufacturing company, the Reo Motor Car Company.

Under the direction of Olds, sales of the new Oldsmobile steadily increased, making it the first American automobile to be produced in any sizeable quantity. The first year's production of 600 units is very significant when compared to the fact that only a few thousand autos were produced by the entire industry in the same time period. Production numbers continued to climb – from 2,500 in 1902; 4,000 in 1903; 5,000 in 1904; and 6,500 in 1905 – with each year breaking all competitors' records. Prior to this only a few earlier manufacturers reached significant production number. In 1897 Francis and Freelan Stanley produced about 100 steam-powered automobiles, and the Pope Manufacturing Company of Hartford (the leading auto maker of that time) produced a total of only 540 cars in 1897-98, nearly all of them electric-powered.

### **Other Early Automobile Makers in Lansing**

Given his very early commercial success, R.E. Olds is considered to be Lansing's most successful pioneer automobile manufacturer. However, part of Lansing's rich automotive history can be told through other less successful vehicle makers. Complementing the story of the first years of the Olds company's growth, these early companies and their attempts at auto production are an integral part of the history of Lansing's automobile industry.

George J. Bohnet, who at one time ran a bicycle shop, designed and drove his first steam-powered car on the streets of Lansing in June 1901. Shortly thereafter, Bohnet partnered with J.W. Post to form the Lansing Automobile Works. Their intended product was a small runabout, similar in design to the already successful Olds model except for the choice of motive power. The company was very short-lived, reportedly producing no more than three automobiles before folding<sup>19</sup>.

The Greenleaf Cycle Company was a local manufacturer of bicycles that briefly dabbled in automobile production. In 1902, Smith Clawson – an engineer by training and a partner in the bicycle company – designed and built a light surrey-style automobile. It was reported in November 1902 that one of the Greenleaf cars was exhibited at a Grange convention in Lansing as part of a display of locally built products, but no records exist that any were ever sold.

Another of Lansing's short-lived automobile manufacturers, the Bates Automobile Company was an outgrowth of the Bates & Edmonds Motor Company, which traced its roots to the Olds Engine Works. Madison F. Bates was once employed at the Olds shop as a machinist, where he assisted in developing the

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<sup>18</sup> The split was primarily driven by an insurmountable difference of opinion between Olds and the company as to the type of automobiles they would produce, and the broader issue of who was in charge of manufacturing. R.E. Olds remained on the company's board of directors for approximately one year before severing all ties.

<sup>19</sup> Bohnet is also credited with being the city's first auto dealer, having organized the Capital Auto Company in 1906 with W.K. Prudden for the sale of Reo cars. He left the company 1932.

engine that was used in Olds' first gasoline-powered vehicle. In 1899, Bates partnered with James P. Edmonds, the company bookkeeper and secretary, to form the Bates & Edmonds Motor Company. This concern manufactured stationary gasoline engines until 1924, when Bates died and the firm was reorganized (under R.E. Olds) as the Hill Diesel Engine Company. In 1903 the partners also entered the field of auto production as the Bates Automobile Company, which first produced a single cylinder runabout and later made a few two-seated, four-cylinder cars.<sup>20</sup> The sale of the cars was poor, and only about twenty-five of the vehicles were produced before the venture closed in 1905.

A trio of Lansing vehicle makers – the Clarkmobile Company, the Clark Motor Car Company and the Clark Power Wagon Company – all traced their industrial ancestry to Lansing's pre-automobile manufacturing economy and the influence of Oldsmobile. The three firms were formed by Frank Clark, whose relationship with R.E. Olds began in the mid-1890s when he was approached by Olds to design the carriage body for the first Oldsmobile.<sup>21</sup> With this experience (and following his father's death), Clark established his own automobile manufacturing company, producing a one-cylinder runabout called the Clarkmobile. Between 1903 and 1905 about one hundred Clarkmobiles were produced, the last three units sold by New Way Motor Company.<sup>22</sup> Clark established the Clark Power Wagon Company and, between 1905 and 1910, manufactured a four-cylinder gasoline truck. In 1910 he formed the Clark Motor Car Company and for two years produced automobiles. He sold the family carriage business in 1909 and in 1913 moved to Pontiac (MI), where he founded the Columbia Motor Truck and Trailer Company, retiring in 1929.

### **Growth of the Industry**

This pattern of new companies being formed, producing a limited number of vehicles, and then folding was echoed throughout the country in the earliest decades of the new automobile industry. In 1900, according to the Automobile Manufacturers Association, there were no more than sixty companies producing cars for sale, with a total output of 4,192 vehicles (a figure which probably includes all vehicles produced, whether experimental or commercial). Of all the makes in existence that year, only the Oldsmobile would ultimately survive, as the company was about to begin volume production of their highly successful model the following year.<sup>23</sup>

As Oldsmobile production climbed in 1901, twenty-five new automobile companies entered the industry. Of those, only five were to be fairly long-lived, including the E.R. Thomas Motor Company of Buffalo (which produced the Thomas Flyer, the first car to circle the world), and the second incarnation of the Stanley brothers' company (after being away from the industry for a few years). George Pierce also produced his first automobiles that year, as his company evolved from producing wire bird cages, to spokes for bicycle wheels, then to complete bicycles and motorcycles, and finally in 1901 to automobiles (later to become Pierce-Arrow).

By 1905, passenger car production had been undertaken by 183 new companies, 93 of which had already ceased production. By the end of the decade, 531 companies had been established, but 346 had gone out of business.<sup>24</sup> Most declared bankruptcy, but others simply gave up as competition from the larger, more-

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<sup>20</sup> J. P. Edmonds, Early Lansing History, (Lansing, Michigan: Franklin DeKleine Co., 1944), p. 143.

<sup>21</sup> Frank was the son of Albert Clark. The father was founder in 1866 of Sprang & Clark, a horseshoer's shop. Later it became Clark & Company, Lansing's largest carriage manufacturer. Frank was assistant superintendent of the company in 1896, and was responsible for overseeing the production of the Oldsmobile body.

<sup>22</sup> Incorporated in 1905, the New Way Motor Company briefly produced a car called the New-Way, but eventually shifted its efforts entirely to the manufacture of stationary gasoline engines (see pages 27-28).

<sup>23</sup> Philip Hillyer Smith, Wheels Within Wheels: A Short History of American Motor Car Manufacturing, (New York: Funk & Wagnakks, 1968), p. 16.

<sup>24</sup> *Ibid.*, p. 25.

successful companies increased. A few had changed hands and some were absorbed into other growing corporations.

There are numerous reasons for the phenomenal growth in the number of automobile companies in the early years of the industry, as well as the equally remarkable failure rate. As the automobile was a relatively new development, many perceived an opportunity to “get in the game” with hopes of making a real profit. At this time, most automobiles carried relatively high price tags and the industry, still in its infancy, was not dominated by any established manufacturer or type of product. A notable exception to this was the Curved Dash Oldsmobile, which was one of the least expensive automobiles available at the time, thus leading to the high demand and production numbers for a single manufacturer.

Like an army on the attack, there were always new recruits to the industry filling the gaps left by those who fell by the wayside, and their numbers swelled. Who were these people so eager and willing to engage in this new and highly speculative venture? The answer is no group in particular. The legion of automakers getting into the business during the period from 1900 to 1910 included companies already established in the manufacture of carriages and bicycles, as previously noted. Also among them were producers of stationery engines, farm machinery, stoves, tacks, hardware, milling machines, locomotives, and household appliances, who believed that building cars offered greater profit possibilities and initiated construction as an adjunct to their standard line. When matters went well and promised a bright future, some of them made car building their primary business; others faring less well and seeing the handwriting on the wall, returned to their core business. Many more went bankrupt.<sup>25</sup>

Prior experience and expertise no doubt played a role in the success or failure of these fledgling automobile manufacturers. As in the case of Olds, the company (as well as the individuals involved) was already well-established as a manufacturer of engines before it expanded into the manufacture of automobiles. Product development issues and market conditions also came into play. As new companies were formed, a wide array of choices faced the investors as to what type of automobile to produce. Choices included the basic vehicle type (runabout, surrey, touring car, etc.); motive power (gasoline, electric, or steam); seating capacity; body type; and a host of other production decisions such as steering control (tiller or wheel), engine placement, configuration, size and horsepower. These decisions, when finally combined and packaged in a single vehicle, could mean market success or failure for the new companies. Sometimes concepts, ideas or products did not have the necessary testing and would appear on the market essentially unproven. Failure of a small company’s only product often meant failure of the entire company, as well as a risk for the consumer. E.H. Cutler, president of the Knox Automobile Company of Springfield (MA) cautioned, “There will be a danger from the attempt to manufacture and sell larger quantities of machines that have not been fully tested.”<sup>26</sup>

Furthermore, as the automobile was still very much a novelty – sometimes viewed as an expensive extravagance of only the wealthy, selling prices could also determine the success of a manufacturer. With the overall market potential not yet fully understood, market saturation was also of concern. Cutler further noted “there is a limit to the quantity that this or any other country can absorb, and we are inclined to advise conservatism in the planning of production.”<sup>27</sup> Still, many companies ventured forth and those that survived arrived at the right combination of product, price and placement (marketing and advertising). As the industry continued to develop, many smaller companies were eclipsed and the industry began to be dominated by a decidedly more select group of major manufacturers.

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<sup>25</sup> Ibid., p. 26.

<sup>26</sup> Ibid., p. 25.

<sup>27</sup> Ibid.

Two of the surviving companies formed during this period helped shape the maturing years of the automobile industry, and remain at the forefront today. In 1903, both the Ford Motor Company and the Buick Motor Company were formally established. While the former is noted for its countless advancements in the development of the automobile industry, and is still the second-largest automobile manufacturer in the world, the latter holds a particular significance with regard to Lansing's automotive history. The Buick Motor Company was headed by William C. "Billy" Durant in 1904. His success ultimately served as the basis for the formation of General Motors, a holding company formed by Durant in 1908. Buick Motor Company stock was exchanged for General Motors stock on October 1 of that year, the first company to come under the control of the new corporation which today ranks as the world's largest automobile company. On November 12, Lansing's Olds Motor Works became the second company brought into the fold, thus ensuring the Olds company's continued survival. Even though their success had started to erode – R.E. Olds resigned from the company in 1904, and sales were in sharp decline following the record year of 1905 – Durant felt the acquisition represented a great opportunity, and he counted on the recognition of the company name as the main tool to rebuild sales for the company. Although General Motors has more recently announced plans to discontinue the model name, the Oldsmobile name still survives as the oldest continuously operating automobile manufacturer in the U.S..

### **Gasoline, Electric or Steam**

One of the fundamental choices to be made in the design of a new automobile was the choice of motive power. In the earliest decades of automobile production, the three main types of power were gasoline, electric, and steam. Lacking a precedent to guide them, the early automobile pioneers showed no particular bias for any one of these methods, and automobiles were available in each of the three categories. Each had its own advantages and disadvantages, but after several decades of development and market acceptance the gasoline engine ultimately prevailed.

One-cylinder gasoline engines were successfully used in the two earliest automobiles developed in the U.S., the Duryea motor wagon in 1893 and the Haynes horse-less carriage in 1894. Experiments with gasoline-powered automobiles continued, and in 1896 Charles Brady King and Henry Ford of Detroit, Alexander Winton of Cleveland, and R.E. Olds in Lansing all successfully tested their own gasoline-powered vehicles. Even with these early successes, the gasoline engine did not achieve immediate dominance.

The most vocal detractors of the gasoline engine were proponents of electric automobiles, who cited the noise and exhaust fumes from the gas engine as its main drawbacks. Alluding to the prevailing location of the engine in these early cars – beneath the passenger seat – Colonel Albert Pope of the Pope Manufacturing Company in Hartford insisted "You can't get people to sit over an explosion."<sup>28</sup> When Pope's company (the nation's leading manufacturer of bicycles at the time) turned to automobile production, within the first two years they produced 500 electric carriages and only forty powered by a gasoline engine.

Electric automobiles were clean, easy to operate, and silent in their operation. Electrical engineer Pedro Salom, touting the virtues of the electric motor over those fueled by gasoline, stated in the *Journal of the Franklin Institute* in 1896:

All the gasoline motors we have seen belch forth from their exhaust pipe a continuous stream of partially unconsumed hydrocarbons in the form of a thick smoke with a highly

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<sup>28</sup> John B. Rae, *The American Automobile: A Brief History*, (Chicago: The University of Chicago Press, 1965), p. 11.

noxious odor. Imagine thousands of such vehicles on the streets, each offering up its column of smell!<sup>29</sup>

As prophetic as these words seem today, the “electrics” had their own drawbacks. Due to the capacity of the batteries, they were limited in speed and range. The batteries were heavy and, lacking durability, needed to be recharged, sometime as often as every thirty miles. Despite these limitations electric automobiles enjoyed a certain popularity – especially in cities – and because of their quietness, cleanliness and overall ease of operation, they were often considered an ideal ladies’ car. Even after Henry Ford became a giant in the gasoline-powered auto industry, his wife Clara drove her own Detroit Electric for personal use.

The third choice of motive power was steam. Steam engines had already been proven reliable and capable for stationary engines, supplying power for a wide variety of industrial and manufacturing applications. Steam power was also in widespread use on railroads and waterways in the nineteenth century. By the 1890s steam engines had been developed that were small and light enough for use in an automobile, while still producing sufficient power. The Stanley brothers began commercial production of their “steamer” in 1897, and the White brothers of Cleveland followed with their own steam-powered model in 1901.

Steamers enjoyed a certain success, as they were more powerful than the early gasoline cars and did not require a complicated transmission.<sup>30</sup> Ultimately, however, their popularity waned for a number of reasons. The engines themselves required constant maintenance and some measure of mechanical skill to operate, making them ill-suited for common users. The boiler needed to be kept full, and while this was not a major obstacle in the populated Northeast, extensive use of steamers in the Southwest (or on cross-country trips) would not have been practical due to the lack of readily available water. Steamers required a “start up” period of time to heat the water enough to produce the steam necessary to run the engine, and so could not be driven immediately upon demand.<sup>31</sup> Furthermore, there was a fear of boiler explosions – a fear that records show was unfounded, but that no doubt dissuaded many from purchasing a steamer.

As the gasoline-powered automobiles gained in popularity and engineering and design developments continued, steam-powered automobiles eventually reached their twilight. Even the most successful manufacturers like the Stanley brothers would simply give up as this market dwindled; after a decade of successful manufacturing, the Whites also switched their focus from steam- to gasoline-powered autos. The insuperable handicap for the steam-driven automobile was that an internal combustion engine has a greater thermal efficiency than a steam engine, so that the same amount of technical effort would inevitably produce better results with the gasoline car than the steamer. There is no evidence that the steam automobile was the victim of a conspiracy on the part of the gas-powered car manufacturers, as has sometimes been alleged by its partisans. What happened to it was simply a manifestation of the survival of the fittest.<sup>32</sup>

These trends were also evident in the earlier steam engine industry. Lansing was a major manufacturing center for steam engines in the nineteenth century. One of the city's more prominent steam engine manufacturers was the Lansing Iron & Engine Works (earlier known as Lansing Iron Works, and located at the corner of W. Washtenaw and S. Capitol). The company was established in 1872 and incorporated in 1885. Under the direction of O.M. and Edward Barnes, it became the leading manufacturer of steam engines, boilers, and pumps in Lansing. The company was briefly reorganized as Jarvis, Barnes &

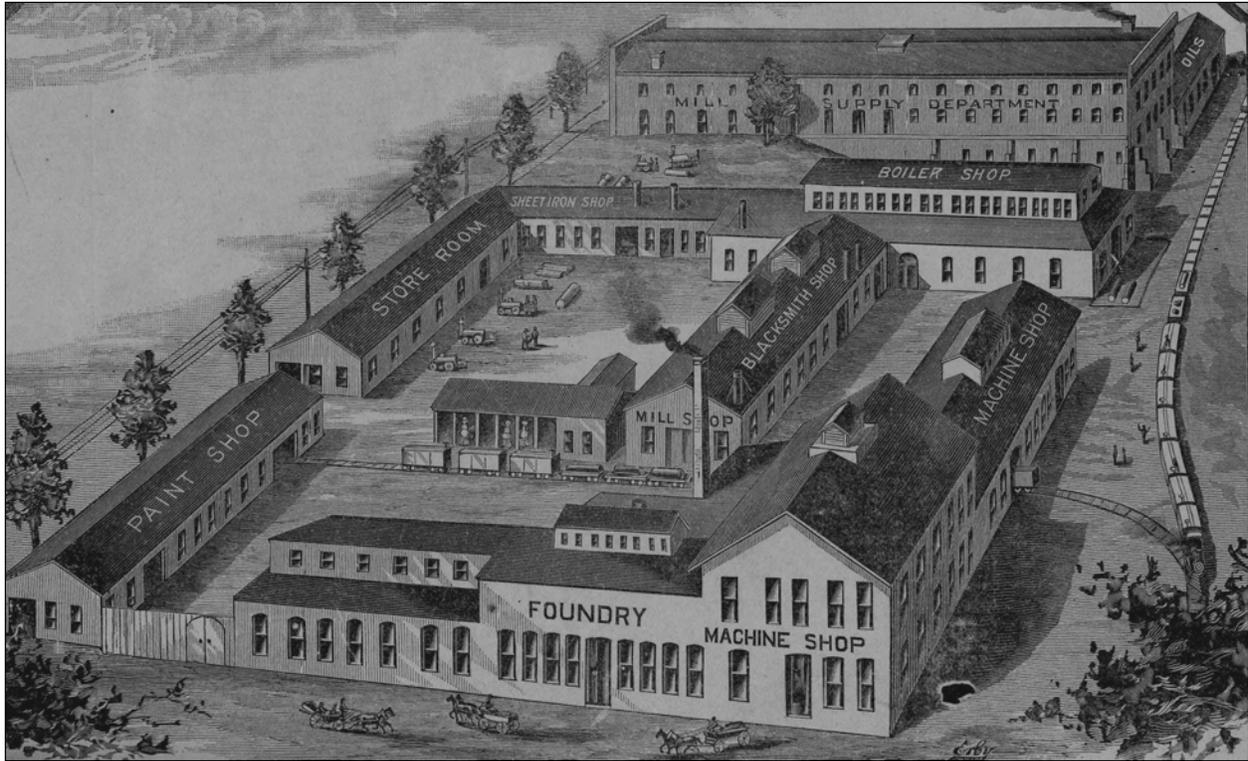
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<sup>29</sup> Ibid., p. 13.

<sup>30</sup> Ibid., p. 14.

<sup>31</sup> Early steamers required about twenty minutes to reach boiling point. This was reduced down to about two minutes using a “flash boiler” as in the White steamers.

<sup>32</sup> Rae, *The American Automobile*, p. 15.



*Plate 4: Lansing Iron & Engine Works, 1889*

Company, and in 1893 it became the Jarvis Engine & Machine Works (905 River). In the 1920s, Jarvis abandoned the now-antiquated steam technology in favor of more lucrative prospects in structural steel fabrication, where the company assumed a leadership position in the twentieth century.

For automotive applications, there was considerable interest in the relative merits of both steam and gas, even so far as to how the two might function in combination. Working in his father's machine shop in the mid-1880s, R.E. Olds was instrumental in developing a small steam engine that used a gasoline burner to heat the water. For his purposes, gasoline was better than other types of fuel (such as wood or coal) because the desired steam pressure was more quickly achieved. In his early experiments with a self-propelled carriage, Olds chose a small two-horsepower steam engine to power his first crude, three-wheeled vehicle. Lacking sufficient power, his second attempt was a four-wheeled carriage that was powered by two steam engines. Neither attempt proved satisfactory.

On the basis of such experiences, and as the engine business continued to evolve in Lansing, manufacturers focused more intensively on the development of a solely gas-driven engine. The Cady & Hildreth Company (1131 Race) is credited with the first major success in 1891. A patent application was subsequently filed in 1895 by R.E. Olds and Madison F. Bates for a stationary "gas or vapor engine" that Olds began producing commercially the following year. With this newer, more powerful gasoline engine successfully tested and in production, Olds decided to adapt it for use on yet another experimental vehicle. In 1896 he was successful, and by the turn of the century the preference for gasoline engines in automobiles was already being established, a factor that would eventually shape the entire industry.

## Industrial Transition

The development of the automobile in America essentially grew from two existing industries: the horse-drawn carriage or wagon industry, and the stationary engine industry. The influence of those earlier industries was apparent in the first experimental automobiles produced in the late-nineteenth century. As America entered the automobile age, products already in commercial production were adapted to the new concept of a self-propelled vehicle. Some nineteenth-century companies became suppliers to the new automobile manufacturers, others would change their product line to suit the new era, and a few even attempted to manufacture automobiles themselves. The transition from the horse-drawn era and industries of that period to the automobile age was evident throughout the country and specific examples can be found in Lansing's industrial past.

The most direct industrial transition was in the carriage or wagon trade. The new self-propelled vehicles were commonly referred to as "horseless carriages" and the lineage was obvious. Using terminology borrowed from the carriage trade, the earliest automobile models were alternately called stanhopes, surreys, cabriolets, broughams and landaulets. The gasoline-powered vehicle first produced by the Duryea brothers was called a "motor wagon" and even as late as 1902 Charles Duryea advertised that his product was "A Carriage – not a Machine."<sup>33</sup> In terms of design, the earliest automobiles were constructed to resemble horse-drawn vehicles, without the shafts and horse. The engines typically were out of sight, placed beneath the seats and towards the rear of the vehicle. Early bodies were made in carriage factories and "the carriage tradition persisted so strongly that many automobile bodies came complete with whip sockets."<sup>34</sup> The familiar carriage-like design and use of terminology perhaps eased the acceptance of the motorcar, but more so was evidence of the transition in the transportation industry.

Along with the bodies, other components easily made the transition from the carriage trade to automobile manufacture, including wheels. As the earliest cars were relatively lightweight – some very close to a horse-drawn vehicle, with only the added weight of a small engine – the wheels designed for carriages were also suitable for use in automobiles. As auto designs later evolved, some wheel manufacturers made the logical transition from carriage wheels to automobile wheels, adapting their factories and product line to become part of the new industry.

Developments in the stationary engine field also impacted the development of the automobile. As that industry moved from large coal- or wood-fired steam engines, to smaller, more powerful engines that used oil, kerosene or gasoline as the fuel to raise steam, to a gasoline-powered internal combustion engine, the early auto pioneers adapted the advancing technology into their own work. Although the bodies may have been constructed by carriage makers and were a holdover from a previous era, the new automobile manufacturers took a fundamental step forward by replacing the horse with a new-found source of power.

These trends played a significant role in Lansing's early dominance in the automobile industry. Lansing was a major engine manufacturing center in the late 1800s, and the companies located here – such as Cady & Hildreth, Olds Engine Works, and Lansing Iron & Engine Works – were among the leading innovators within that industry. The city also had a fully-developed carriage manufacturing trade, with the well-established machine shops of Clark & Company and Lansing Wagon Works in operation. Adjunct component suppliers like the Lansing Wheel Company, W.K. Prudden & Company, and Lansing Spoke Company were very much a part of the national carriage industry, as well as the general manufacturing base of the city.

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<sup>33</sup> Philip Hillyer Smith, *Wheels Within Wheels*, p. 33.

<sup>34</sup> Rae, *The American Automobile*, p. 20.

## Why Lansing?

The concentration of these industries in Lansing played a pivotal role in the city's move into the automobile age, and largely explains why Lansing rose to early prominence in the auto industry. Why Lansing? The industrial climate in late nineteenth-century Lansing provided fertile ground for innovation, growth and development. Lansing was already a major manufacturing and commerce center, with a growing industrial infrastructure, a capable workforce, and successful businessmen ready to apply their talent, both in the factory and the boardroom. Lansing's business leaders were also willing to invest in the city's future with financial support for new businesses and industries.

The success of many Lansing businesses could be directly attributed to this spirit of good will and cooperation. Even R.E. Olds was an early beneficiary. Using a gasoline engine produced in his own shop, Olds enlisted the help of Frank Clark<sup>35</sup> to design an auto body for his experimental gas-powered vehicle. A year later, after successfully testing the car, Olds sought to expand production and he approached Edward W. Sparrow, a local businessman, land speculator, and real estate developer.<sup>36</sup> The funds provided by Sparrow and others helped establish Michigan's first automobile company in the City of Lansing. Even after the company had moved to Detroit, the Olds Motor Works was brought back to Lansing primarily through the efforts of the Lansing Businessmen's Association, who promised Olds a major parcel of land south of the city for construction of a new plant.<sup>37</sup> As further enticement, the Auto Body Company was formed in 1901 by some of the same local businessmen, thus eliminating a major shipping expense for the Olds enterprise. Support of this kind was a strong inducement to other promising start-up companies, as well.

## The Manufacturing Process Evolves

As the automobile continued to evolve, the manufacturing process became more complex. A number of different industrial processes were utilized, including forging (for axles, suspension parts, engine components and other major, heavy-duty components); casting (for housings, fittings, trim parts and some engine parts); stamping (for thinner metal shaping, such as sheet metal work for fenders, bodies, hubs and wheels); machining (for finishing operations of forged, cast and stamped parts as well as the manufacture of smaller parts, fittings, and fasteners); and woodworking (for spokes, wheels, body components, and later, inner structures of sheet metal bodies). As production and demand increased, Lansing companies were formed and/or expanded to supply the industry.

While a number of parts could be made within the automobile factories, the manufacturing process – especially in the earliest years – was assembly operations, which required securing parts and components from outside sources (second-tier suppliers) and piecing them together (see photo, next page). Following the fire that destroyed most of the Olds Detroit plant in 1901, the effect on production schedules had been minimal because nearly all the parts for the Oldsmobile were being built by outside suppliers, with entire major components supplied by other firms.<sup>38</sup> In 1900, *Motor Age* magazine noted that a manufacturer could

... now buy almost everything that goes to make up a motor-vehicle and can assemble it, which is a sufficiently difficult task, and devote the rest of his time to the selling of the

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<sup>35</sup> See page 18.

<sup>36</sup> Sparrow was president of the Lansing Wheelbarrow Company and City National Bank, and was a major benefactor of the municipal hospital that bears his name.

<sup>37</sup> The presence and subsequent formation of other automobile-related companies also influenced Olds' decision to move back to Lansing.

<sup>38</sup> Oldsmobile engines were ordered from Leland and Faulconer at this time, and transmissions were supplied by a machine shop owned by the Dodge brothers.

product. This course requires the least investment, involves the least risk, gives the most rapid turn-over of what money is invested, and finally, leads to success by the straightest and easiest road.<sup>39</sup>

Manufacturers like Olds rapidly reached success as high-volume producers by concentrating on assembly operations that used parts and components from outside suppliers, a practice that still is common in today's automobile industry.

In the transitional years from the horse-drawn era to the automobile age, some existing Lansing companies evolved to meet the new challenges of the automobile industry. Others were formed specifically to manufacture and supply parts to the automobile assembly plants being opened in the city. In one case, a manufacturer established three separate companies in support of his main venture; Atlas Drop Forge, Michigan Screw Company, and Nation Coil were all founded in 1906 by R.E. Olds to produce parts for his Reo Motor Car Company.



*Plate 5: Engine assembly at Novo Engine Company, early 1910s*

Atlas Drop Forge, Michigan Screw Company, and Nation Coil were all founded in 1906 by R.E. Olds to produce parts for his Reo Motor Car Company.

### **Focusing on Lansing's Achievements**

Although Detroit would eventually become known as the Motor City, the automobile was actually invented and developed at other locations in the late-nineteenth century. Lansing was one of them. Lansing's contributions to the founding and development of the automobile industry are liberally cited in technical histories recognizing the individuals and companies that played a pivotal role in these pioneering efforts.

As research for this study progressed, it became evident that the automobile-related history of Lansing was a story of interrelationships and intersecting paths, in terms of the sites, structures, products, and individuals associated with it. Several patterns were revealed. In looking through city directories, for instance, we often found multiple complementary businesses listed at the same address. In other cases, a specific structure might become the location of a succession of different auto-related businesses over the forty-year period of study. New businesses were sometimes incubated within the walls of other successful firms before establishing their own identity at another location in Lansing. As one business would reach its end, a new auto-related concern would adapt the physical plant of the closed business for its own use. Such was the case of the vast complex of E. Bement & Sons, Lansing's leading manufacturer in the nineteenth century and maker of bobsleds, agricultural implements and stoves (page 9). The company ceased operations about 1897, and in 1910 the factory buildings were sold. At least two of the new occupants were part of the growing auto-related industry; Gier & Dail Manufacturing Company, manufacturers of stamped steel wheel hub flanges, utilized part of the site, and the newly-formed Reo Motor Truck Company began their initial production there.

<sup>39</sup> May, *A Most Unique Machine*, p. 117.

This interrelationship is also found in the goods produced by Lansing companies, from concept to production. The development of one product would directly contribute to the invention of another product, as was the case of the gasoline stationary engine's contribution to the development of an internal combustion engine for automobiles. Furthermore, as the automobile industry was still a very new undertaking, vertical integration was not a viable consideration before 1930.<sup>40</sup> Instead, the industry depended on a range of outside suppliers for the parts needed to assemble their vehicles. Throughout Lansing, companies produced everything from engines to wheels to bodies, all feeding into the various automobile and truck manufacturing operations. Without diversification, the reliance on a single major industry would later have a devastating effect on many second-tier suppliers dedicated solely to vehicle production.

The development and success of Lansing's automobile-related industries within the period of this study was guided by a number of local individuals. Many of them gained experience and training as employees of successful nineteenth-century industries such as E. Bement & Sons or Clark & Company. As Lansing's industry shifted, those individuals would apply their experience and knowledge to the auto industry, producing entirely new lines to meet the demands of the era. After time, ownership and leadership would pass from father to son and the next generation of local industry leaders would emerge. As one firm achieved success, the principals created new companies, thus expanding Lansing's industrial base even further. As companies became established and successful, it was also not uncommon for the corporate leadership of one company to be tapped to head another company.

### Gasoline Engine Manufacturers

The development that had the greatest single impact on the shift of industry in Lansing was that of the gasoline engine. The Cady & Hildreth Company is credited with making one of the first successful gasoline engines in 1891.<sup>41</sup> A year later, P.F. Olds & Son developed a gasoline engine that was intended

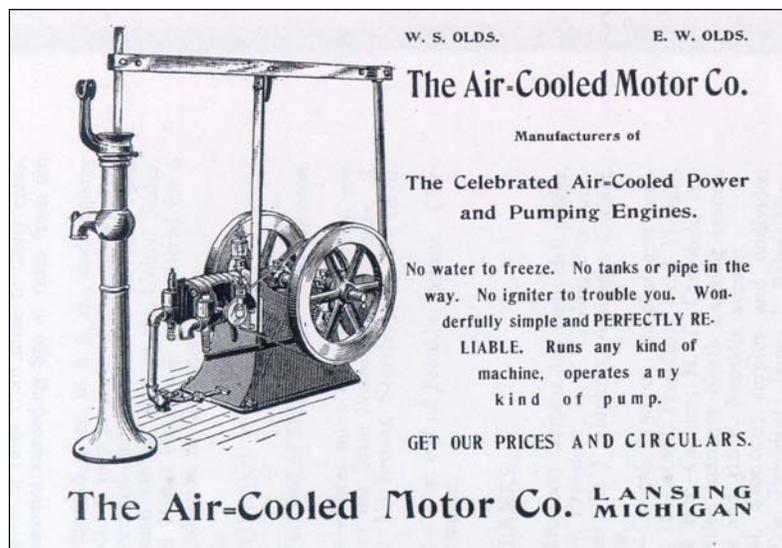


Plate 6: Air-Cooled Motor Company advertisement, 1906

for stationary applications as well as marine use. After several failed experiments with steam-powered vehicles, R.E. Olds conceived of a different application for the stationary gas engine, and in 1896 produced his first gas-powered automobile. A year later the Olds Motor Works was formed and Lansing ushered in the automobile age.

To serve the burgeoning auto industry, other gasoline engine manufacturers were established in Lansing and the city soon became a major center of production. By 1910 there were nine gas engine manufacturers in Lansing, including

<sup>40</sup> Vertical integration is a manufacturing concept in which all necessary materials and components are produced by different operating branches/divisions of the parent company, to the extent possible.

<sup>41</sup> A small machine repair shop that had originally been in business as Cady & North, the company began building small two-cycle marine engines and farm pumps in the 1890s. The company's original machine shop and foundry, now highly altered, was included in this survey and is located at 1131 Race Street

the Bates & Edmonds Motor Company, Lansing Motor & Pump Company, Hildreth Manufacturing Company, New Way Motor Company, Beilfuss Motor Company, Ideal Motor Company, W.S. Olds Air-Cooled Motor Company, The Peerless Motor Company, and Seager Engine Works. Of the nine, only the first four sites still retain some evidence of these past operations.

The success of the Olds Gasoline Engine Works inspired former employees Madison F. Bates and James P. Edmonds to form the Bates & Edmonds Motor Company (240 Museum Drive) in 1899. This concern manufactured stationary gasoline engines until 1924, when Bates died and the firm was reorganized (under R.E. Olds) as the Hill Diesel Engine Company. An outgrowth of the original firm was the Bates Automobile Company, which produced a small number of runabouts between 1903 and 1905. Parts of that operation have since been incorporated into Lansing's R.E. Olds Museum.

The Hildreth Manufacturing Company can trace its roots back to the Cady & Hildreth Company. In 1901 the company was reorganized as the Hildreth Motor & Pump Company, and then as the Hildreth Manufacturing Company. Under the direction of C.E. Bement, the company began the manufacture of a four-cylinder gasoline engine in 1908. In 1911 the name of the company was changed to Novo Engine Company. Improvements in product design and capacity were constant, and as business grew, the company moved to a new facility (700 Porter) that ultimately grew to cover eight acres. Novo continued operations at this location until 1954. Later occupied by Lansing Tool & Die, the site is currently owned and operated by the Demmer Corporation, manufacturers of metal products.

The Lansing Motor & Pump Company (326 S. Hosmer) was established by John Ebel in 1902. Ebel was born in northwest Ohio in 1869, the son of German immigrants. The family lived briefly in Indiana, and in 1882 moved to Michigan where the father farmed. The son worked for a time on the farm, as well as the Holliday Windmill & Pump Company. When the Maud S. Wind Mill & Pump Company was organized in Lansing, Ebel was hired as a salesman from 1890 to 1901. In 1902 he formed the Lansing Motor & Pump Company, where he served as president and manager of the company; his son Luewelson was vice-president and superintendent. In the mid-1920s the company name was changed to Ebel Hoist & Pump Company. With the addition of a large machine shop in 1927, the operation expanded to include several smaller businesses, including Superior Brass & Aluminum Castings (1945-53) and Industrial Patterns (1963). It remains in operation today in much diminished capacity.



*Plate 7: New Way Motor Company, 2003*

The New Way Motor Company (704 E. Oakland) was incorporated in January of 1905 with \$100,000 capital stock. Successor to the Clarkmobile Company (which had recently discontinued operations and transferred its patents and properties), New Way was headed by William Newbrough and Harris Thomas. The new firm acquired and completed production of the vehicles left behind by that company, and briefly produced their own model. Called the New-Way, it was reportedly named for Charles Way, the mechanical engineer who collaborated with Newbrough in the design. Soon thereafter, the company shifted its efforts entirely to the manufacture of stationary gasoline engines and became one of Lansing's most successful local industries,

continuing in operation until 1930 when it was placed in receivership. Only two buildings of the vast factory complex are still standing today.<sup>42</sup>

While some manufacturers would produce engines exclusively for use in automobiles and trucks, the industry would evolve to primarily manufacture engines for stationary applications such as power sources for machinery, pumps and hoists. Nevertheless, aside from being an important segment of Lansing's industrial base, its link to the early automobile industry is undeniable.

### **“Forging Capital of the World”**

For decades, Lansing supported one of the highest concentrations of forges in the nation, an industry closely associated with the automobile. Forging is the process of heating metal to a plastic-like state (at a temperature approximately 2200 degrees Fahrenheit) and then reforming it under pressure utilizing a drop hammer or a press. The process produces pieces much higher in tensile strength than other processes such as casting or stamping. The forging process is especially well-suited for producing heavy-duty parts for automotive applications, such as suspension components, crankshafts, and connecting rods. Over their years of operation, Lansing forges supplied a wide variety of parts to the local automobile and truck assembly plants, as well as for production of agricultural and off-road equipment.

As a result of this activity, Lansing became known as the “Forging Capital of the World” in the early twentieth century in recognition of the five major forging operations located in the city. The oldest business of this kind in Lansing, Atlas Drop Forge (209 W. Mt. Hope), was organized in 1906 by R.E. Olds to support production of his Reo automobile factory. The factory was purchased in 1945 by Dana Corporation, and as Dana's only forge plant it supplied automotive parts to the parent company. The site is still in use as heat treating facility, the only forging operation in Lansing that is still in continuous use. Other forging operations followed later: the Melling Forging Company (1709



*Plate 8: Melling Forging Company, 2003*

Thompson) and Emergency Drop Forge (later known as Lansing Drop Forge) in 1917; Federal Drop Forge (2807 Martin Luther King Drive) in 1920; and Lindell Drop Forge (2830 Martin Luther King

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<sup>42</sup> The president of the New Way Company, William Newbrough, was born in Lansing in 1867. In 1883, Newbrough accepted a position with E. Bement & Sons, where he remained until 1903. For eighteen months he worked for the Clark Automobile Company, and with the organization of the New Way Motor Company in 1905 was appointed president and general manager of the firm, retiring in 1929. At one time Newbrough was chairman of the board of the Motor Wheel Corporation, and during his lifetime was associated with numerous other Lansing industries. He died in 1938 following an automobile accident. Newbrough's home at 615 N. Capitol Street was built in 1912, and was purchased by Auto Owners Insurance ca. 1929. The home is included in several area architecture surveys, and is included in the ANHA resource inventory.

Blvd.) in 1923. Aside from the Atlas forge, only Melling Forging Company is still located on its original site.

In addition to these major companies, many smaller forges were operated within engine or pump manufacturing facilities, as part of machine shops or as an on-site support operation within an automobile plant. An example of the latter is the Olds Forge. Originally built as the Ryan-Bohn Foundry in 1920, it was purchased by R.E. Olds in 1930. It produced forged parts for Oldsmobiles until 1984. The site is now buried within the vast General Motors complex.

The forging industry grew deep roots, and it remained an economic leader in Lansing through the next half-century. So great was its influence that the Drop Forging Association moved its national headquarters to Lansing in 1956. The Association was formed in 1935, an outgrowth of the old Institute of Drop Forging. Four of the five drop forges then in operation in Lansing – Federal, Lansing, Lindell, and Melling – were included in the 100 member plants from the United States and Canada. The decision to relocate the headquarters from Cleveland to Lansing was made at the Association’s 1955 annual meeting when new directors were also elected, including Walter E. Lindell, president of Lansing’s Lindell Drop Forge.

The forging industry enjoyed tremendous growth and prosperity in Lansing until 1979, one of the last periods of peak production, when the combined workforce of the five major forges totaled 1,400 employees. The following year the forges paid \$11 million in property taxes, and were struggling to survive. By November 1981, the combined workforce had been reduced to 850, and local forging plants faced more layoffs and closings. Among reasons cited at the time were a weak economy, rising costs, and labor unrest (manifested by strikes at both Lindell and Melling). Increased foreign competition and a shift in automobile design and technology also played a major role. Downsizing of cars and the virtual elimination of V-8 engines in favor of smaller four- and six-cylinder configurations, as well as an emphasis on front-wheel drive cars (which reduced the need for forged parts) had an overall negative impact on the forging industry in Lansing.

## **Wheel Production**

From the final decades of the nineteenth century and into the early years of the twentieth, there were major shifts in the Lansing vehicle industry, as the nation’s demand changed from horse-drawn wagons and carriages to automobiles. By the late 1880s, Lansing Wheel Company had already established itself as a major supplier of wheels for the wagon and carriage trade. In 1888, the company produced forty to fifty sets of wheels per day for the Michigan market. Just one year later, production had tripled to 150 sets per day, thanks to the introduction of new labor-saving machinery. With this improvement, the company’s customer base expanded to New York, Indiana, Illinois, Wisconsin, Iowa, Kansas, California, and elsewhere throughout Michigan. Lansing Wheel products were used by noted wagon and carriage builders such as the Studebaker Brothers of South Bend (IN); Michigan Buggy Company in Kalamazoo (MI); and the Racine Wagon & Carriage Company and Fish Brothers Wagon Company, both of Racine (WI). Kelly Maus & Company, Chicago’s largest dealer in hardware and carriage goods, used Lansing Wheel Company products exclusively. The Lansing Wheel facility was a complete, self-contained factory, able to perform the entire production process from log to finished wheel. The company was incorporated in 1885 and reincorporated in 1887. Its success was credited to W.K. Prudden (then secretary-treasurer and general manager of the company), a figure who would come to play a leading role in the industrial and civic history of Lansing. In 1892, Prudden became president of the newly incorporated Michigan Wheel Company, which was ultimately merged into Motor Wheel.

In 1903 W. K. Prudden and Company was launched, occupying a site at 412 E. Michigan Avenue (no longer extant). As business increased, the company relocated to the north side of May Street on a site

adjoining the Michigan Central Rail line. A modest block building, it housed offices on the second floor and manufacturing space for racing sulky wheels on the first. At this building (now demolished), Prudden developed one of the major advancements in automotive wheel design – the artillery type of automobile wheel. As automobiles increased in size and weight, a stronger wheel was needed to safely carry the heavier load. The artillery wheel featured a much heavier spoke than the standard carriage wheels in use at the time, an example of how existing product designs were redeveloped and adapted to the new automobile industry. Prudden became one of the major suppliers to the automobile industry, and the company expanded its facilities. A machine shop was constructed across May Street – just south of the original office building – and by 1910 the company began manufacturing rims.<sup>43</sup> With Harry F. Harper as president, the company was reorganized as the Prudden Wheel Company in 1916, and a major new factory/office building was constructed at the south end of the complex (725 E. Saginaw).

To the north of the Prudden site was the Lansing Spoke Company. Located at the junction of the Detroit, Grand Rapids & Western and the Michigan Central railroad lines, it was already well established by 1898. The site consisted of a saw mill, large drying shed, manufacturing and finishing areas for spokes and rims, and a rail siding, as well as vast storage areas for logs and wood. Headed by E.S. Porter and L.J. Driggs, the company successfully made the transition to the new automobile market and eventually changing its name to the Auto Wheel Company.

Another Lansing company that played a major role in Lansing's early automobile wheel industry was Gier Pressed Steel (1508 N. Larch). Founded in 1903 as the Gier & Dail Manufacturing Company, the firm produced a general line of stamping and pressed steel work.<sup>44</sup> With a capitalization of \$30,000, the company was incorporated in June 1915. Seeing the success of other local companies in the production of automobile components, the partners decided to develop their own niche in that fast-growing industry. In April 1910 Gier & Dail purchased a 44,000 square foot building on N. Grand (part of the former Bement factory). With five presses, the company began to supply wheel hub flanges and valve stem ferules to other local wheel companies already in operation. The partnership dissolved in 1913.<sup>45</sup>

With a capitalization of \$500,000 Burton S. Gier established the Gier Pressed Steel Company in December 1915.<sup>46</sup> The officers for the new company were W.K. Prudden (president), Harry E. Bradner (vice-president), Harry F. Harper (treasurer), and B.S. Gier (secretary and general manager). In 1916, the company opened a \$200,000 plant immediately north of the Auto Wheel Company on N. Larch. Starting with sixty-six presses and a work force of 200, the company manufactured a range of steel products – from kitchen utensils to auto bodies – with a principle focus on automobile wheel components.

The relationships between these companies – both in goods produced and leadership – would become more formalized in 1920. That year, three major Lansing firms and another from Tennessee would be merged together to form Motor Wheel Corporation. Auto Wheel (represented by Drury L. Porter, son of E. S. Porter), Prudden Wheel (headed by Harry F. Harper), and Gier Pressed Steel (founded and still managed by B. S. Gier) formed the local basis of the new company. The fourth company involved in the merger was Weis & Lesh Manufacturing Company of Memphis (TN), which had holdings of thousands of acres of hickory hardwood and would supply an important raw material to the new company; the Lansing partners knew the amount of wood needed to satisfy the national automobile wheel demand would be huge, since more than 90% of all vehicles produced in the U.S. in 1920 used wood spoke wheels.

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<sup>43</sup> About that same year, the Ford wheel shop was built to the immediate east of the machine shop. It was demolished in 1954.

<sup>44</sup> At that time, the company also produced a stamped steel postcard rack as a specialty

<sup>45</sup> Following the split, partner Elmer I. Dail established the Dail Steel Products Company (1000 S. Hosmer), which is also included in the survey.

<sup>46</sup> The Gier residence (301 N. Sycamore) is also part of this survey.

In their first year of operation Motor Wheel produced one million wood-spoke automobile wheels. To maintain their dominance, Motor Wheel purchased the Disteel wheel patents in 1923, as well as the assets of the Detroit Pressed Steel Company, and moved all of their machinery and equipment to Lansing. Along with these acquisitions, Motor Wheel also purchased the Forsyth Brothers Company of Harvey (IL), another manufacturer of steel wheels. As with the previous acquisitions, all of the Forsyth company's equipment and machinery was relocated to the Lansing plant.

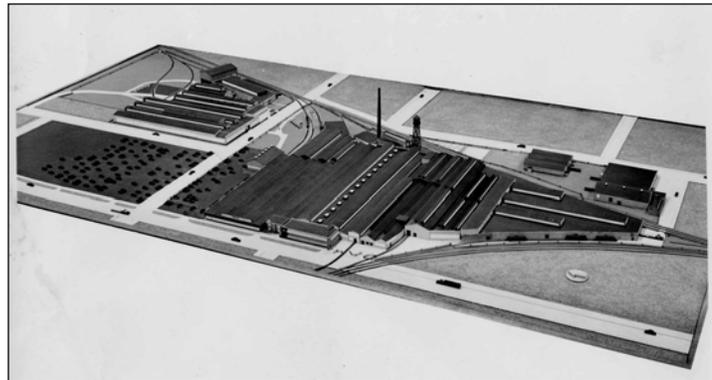
Even though the company was a leading supplier of wooden wheels, the company anticipated that automobile wheels would one day be constructed of steel, and in 1924 Motor Wheel made its move into the steel wheel market with the introduction of their Truarc wheel. The new product featured a steel disc with a demountable rim. This development represented a radical departure from the design and overall concept of the spoke wheel that, even with advancements, was still essentially a holdover from the carriage era. The new design had a distinctively modern appearance and apparently attracted the attention of the buying public, as it was offered as optional equipment on two or three of the leading makes of automobiles of the era.

The introduction of this exciting new product, along with the acquisitions of possible competitors, ensured Motor Wheel's continued dominance in the wheel industry. A fiftieth anniversary promotional brochure stated:

Because of its farsightedness and pioneering spirit, Motor Wheel had gained a unique position in the industry by 1924. It became the world's largest manufacturer of both wood and steel wheels. As of that year, Motor Wheel had produced more steel wheels for use on passenger cars than all other manufacturers combined.<sup>47</sup>

Further steel wheel developments followed, with the introduction of wire wheels by 1926. The design of these wheels was changed in 1930 to create a larger hub shell and a reduction in the number of spokes, resulting in a more rigid wheel design.

Significant product advancements continued throughout the company's history. In 1931, Motor Wheel teamed up with Campbell, Wyant & Cannon Foundry Company to introduce Centrifuse brake drums.<sup>48</sup> The Campbell company developed this process, which involved centrifugally casting and fusing iron into a rolled steel ring to create a brake drum that had a textured iron braking surface with the strength of steel. The Centrifuse brake drums were lighter in weight than cast brake drums, but stronger. In 1953, Motor Wheel introduced the Electrofuse welding process, in which eliminating the use of rivets to attach the rim to the wheel's disc enabled the construction of an airtight steel wheel, thus permitting the use of a tubeless tire, today's standard on the road.



*Plate 9: Motor Wheel Corporation, ca. 1960s*

<sup>47</sup> Our 50<sup>th</sup> Year: Motor Wheel Corporation 1920-1970 (Lansing: Motor Wheel Public Relations Department, [1970]), p. 6.

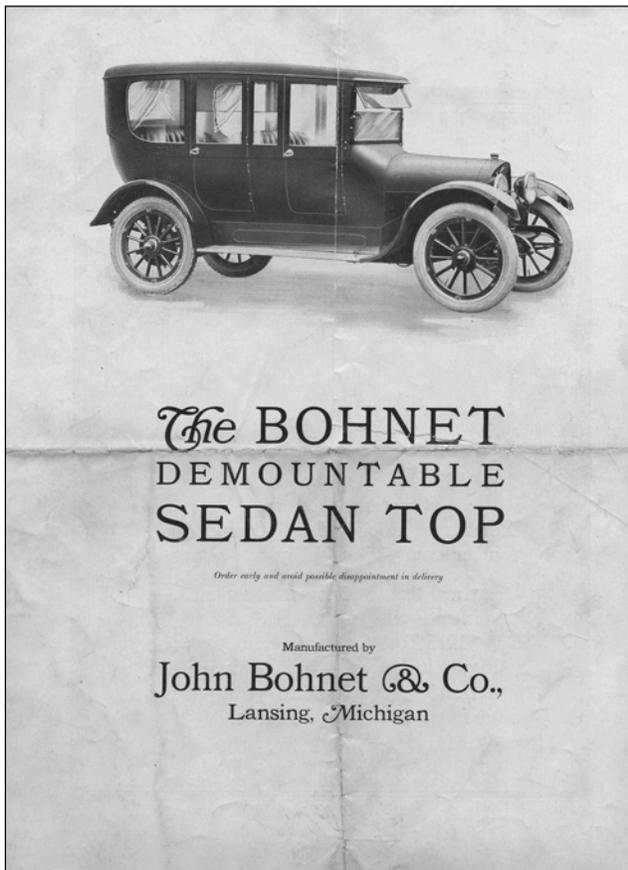
<sup>48</sup> Again, the acquisition of Campbell's rights to this process further ensured Motor Wheel's leadership position in the industry.

Motor Wheel became a subsidiary of Goodyear Tire and Rubber in 1964. By 1970, with thirteen plants in operation, the corporation produced more than 14 million wheels annually, available in 700 different styles. The company remained one of Lansing's major employers, but in 1996 the Motor Wheel Corporation left Lansing and was merged with Hayes Wheels International,<sup>49</sup> a transaction that was valued at approximately \$1.1 billion.

### Automobile Accessories

Many Lansing companies were involved in the manufacture of automobile related "after market" accessories. While these products were marketed to the general public, many manufacturers maintained direct links to other Lansing firms. They would create products uniquely fitted to automobiles produced by Lansing concerns, or would offer to install their product on a new automobile before it left the factory.

John Bohnet & Company represents one type of after-market accessory manufacturers. Established in 1910 as an automobile top manufacturer, the company developed and produced a "demountable" hard top that allowed the conversion of an open touring car to a closed sedan. According to a 1915 advertising brochure, the Bohnet tops were available in two models: the version fitted for a four-cylinder Reo automobile at a cost of \$195, or the higher-priced Reo Six model for \$215. The tops were advertised as



*Plate 10: Locally produced auto accessory designed to fit Reo models  
Advertising brochure, ca 1918*

Easy to Attach – Replace two windshield bolts, adjust two set screws at top of the windshield, tighten two nuts on tonneau top irons and adjust door handles. Your Reo is then converted into an all-year car.<sup>50</sup>

By 1919, the company turned their expertise to producing commercial bodies, joining other area firms in the manufacture of bodies for truck chassis that rolled off Lansing assembly lines.

Capitalizing on the widespread national interest in automobile camping in the 1920s, the Autoberth Company of Lansing produced a pull-down spring bed that could be fitted into the ceiling of a closed car or sedan. With the motto "Your 'hotel' is where you are!" the Autoberth Company spoke directly to millions of automobile tourists. This auto accessory eliminated the need to take a tent on the road, and it offered a good night's sleep, safe and secure in one's own automobile. The Autoberth Company produced an item that had a national market and was part of an important early era of automobile use and development. Notable for Lansing, the company's advertising brochure depicted its models specifically fitted for Oldsmobiles (although Pontiac and Chevrolet two-door sedans were added later), further adding that there would

<sup>49</sup> The Hayes corporation is currently headquartered in Northville (MI).

<sup>50</sup> Advertising brochure from the collection of FPML/CADL.

be “no extra charge for installing the F-28 Autoberth in new cars if installed before shipment from Oldsmobile factory.”<sup>51</sup> Once located at 832 W. Main, the company operated in Lansing through the late twenties.

### Auto Haul-Away Industry

Lansing's auto haul-away business may have eventually been developed elsewhere, the pioneers of this business were found in Lansing. In the early decades of automobile mass production, one method used to get new cars from the factory to the dealerships or sales agencies was to ship them by rail. This method had its limitations, due to space and the number of box cars that were available for transport. Another method was to hire individuals to drive the new cars from the assembly plants to the dealers – not the most efficient method, but still widely used. Dealers were willing to pay good fees to someone who could get their cars delivered in a reliable manner, as demand had begun to outstrip the supply of automobiles, and inadequate delivery from the factory affected business significantly. Improvement was needed.

Car distribution managers served as a liaison between the manufacturer and the sales agencies. At Reo Motor Car Company the distribution chief was W. Howard Sober, who started with the firm in 1912 as an office boy. By the end of World War I, he was car distribution manager in charge of domestic and foreign delivery of cars and trucks. Seizing the opportunity presented by dealers willing to pay to have individual cars driven from the factory to their locations, Sober began enlisting drivers to deliver new Reos to anxious dealers. Even though drivers were seemingly plentiful, demand was so great that Sober would tap fellow Reo employees to deliver cars and, at times, even he and his wife would get behind the wheel themselves.

Due to his ability to deliver new automobiles, Sober became very popular with out-of-town dealers. Reo officials also noted his success in this dual capacity. After issuing a warning or two, the company response was to ask for his resignation in 1925. At that point, Sober and his wife decided to make their sideline drive-away business a full-time business. Their first office was in their home on W. Ottawa, but as the business grew they moved into various facilities around Lansing, at one time even occupying the former Ryan-Bohn foundry.

Eventually, the drive-away business would evolve into the auto haul-away business. Due to the inherent limitations and inefficiencies of delivering one car at a time to a distant dealership, the industry searched for a method of transporting multiple cars in one trip. In 1924 a tow bar operation was tried that allowed one driver the ability to deliver two cars per trip. By 1928 the auto haul-away business had been developed, with Sober once again at the forefront, having experimented with an auto-hauling truck as early as 1925. Eventually, Sober would contract with Fruehauf, the pioneer semi-trailer manufacturer in Detroit, to build a trailer that was capable of carrying seven or eight automobiles in a single load.



Plate 11: Auto-touring accessory for recreational travelers, ca. 1924

<sup>51</sup> Advertising brochure from the collection of Daniel Hershberger

In addition to Howard Sober, Inc., other Lansing firms played key roles in the expansion of the auto haul-away industry: in 1928 C & J Commercial Driveaway was co-founded by Hal Church and Vern Jenks; and in 1935 Vern Jenks, Donald White and Joe Franc opened Industrial Transport.

In the 1930s, as the auto haul-away concept was further developed, shipping control shifted from the dealer to the manufacturer. The auto haul-away business simply adapted to this change by signing contracts with the automakers. As the demand for new automobiles continued to grow, the haul-away industry would spread throughout the country, aided by the establishment of terminals in other states. Now the most common method of new car delivery across the nation, the industry in fact began in Lansing, delivering products produced by Lansing factories.

### **Automobile and Commercial Body Manufacturers**

While Lansing automobile manufacturers produced many components and parts within their own plants, they commonly contracted out the production of bodies, first for passenger autos and later for commercial vehicles like trucks and buses. Finished bodies were shipped on a regular schedule to the assembly lines of Lansing factories. Within the first three decades of the twentieth century, as the demand continued to increase for automobiles and the commercial vehicle market developed, Lansing area body manufacturers enjoyed tremendous growth.

The Auto Body Company was the first company specifically created for the manufacture of bodies for the fledgling automobile industry in Lansing. With an initial capitalization of \$12,000, the company was incorporated in 1901 under the leadership of the following officers: Lawrence Price (president); H.E. Thomas (vice-president); E.S. Porter (treasurer); and H.E. Bradner (secretary and manager). The company purchased a small two-story building on E. Grand River Avenue (a former stone planing mill next to the river) and renovated it for the manufacture of bodies. Since the automobile industry was still in its infancy at this time, this venture was in part an experiment whose success relied on the future growth and expansion of the automobile industry. While the market for automobiles remained relatively small, Auto Body supplemented its operations by manufacturing sleighs, buggy parts and other sundry items, all in an effort to keep the firm's fifteen employees busy.

With the growth of the automobile industry in Lansing, the experiment proved to be a success. Auto Body became the largest plant of its kind in the early twentieth century, providing bodies for the Oldsmobile, ClarkMobile,<sup>52</sup> Durant, and (initially) Reos, in addition to Rambler, Stearns, and Yale vehicles. The company went on to expand its line beyond automobile bodies to include truck cabs, bus bodies, streetcars and interurban cars. By 1924 the original small shop had grown to be a huge three-story plant encompassing 500,000 square feet of space, and occupying a ten-acre site along the east bank of the river from E. Grand River Avenue to Clinton Street. Capitalization had grown to \$1,500,000 by this time. The initial fifteen employees had grown to a workforce of 1,200, and Auto Body paid out over \$1,000,000 in wages annually. The plant reached a production high of 70,000 bodies per year during the 1920s, but in 1937 the company closed due to the Depression economy. The Auto Body plant building was destroyed by fire in 1971.

While the Auto Body Company was formed specifically to manufacture automobile bodies, other Lansing firms that predated the auto adapted their product lines to meet the demands of the new industries. Lansing Wagon Works, organized in 1881, produced about 5,000 horse-drawn vehicles per year, including freight wagons, and high and medium lines of carriages. As growth in the automobile market diminished the demand for these vehicles, the company built its last wagons in 1916 and the following

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<sup>52</sup> One hundred ClarkMobiles were produced in Lansing between 1903 and 1905.

year changed its name to Lansing Body Company. Production then shifted to the manufacture of commercial bodies for hearses, jitneys and delivery trucks, many to be mounted on Reo chassis.

Another notable nineteenth-century Lansing company took an even more indirect path to the truck body industry. Hugh Lyons & Company (701 E. South) was established in 1888 and incorporated in 1894. When Lyons opened his Lansing plant, it was only the second of its kind in the state (the other was in Detroit).<sup>53</sup> In addition to showcases, the company manufactured store fixtures and retail display items, as well as their patented hat conformator, which claimed to shape a hat precisely to the buyer's head, thereby making a new hat feel as comfortable as an old one. While the company continued to produce display fixtures, a portion of the plant was renovated in the early 1920s for production of commercial truck bodies. Hugh Lyons & Company made Reo truck bodies until 1930, when that company began producing their bodies in-house. Hugh Lyons manufactured other specialty bodies for trucks and commercial vehicles as well, and marketed the Way Automatic Dump Body in the mid-1920s. As a prominent businessman and public figure, Hugh Lyons served two terms as mayor of Lansing. Only a small portion of the manufacturing complex remains today



*Plate 12: Lansing Commercial Body Company manufactured truck bodies in 1923-25*

As the automobile and truck industry matured during the late teens and twenties, a number of other vehicle body manufacturers were established in Lansing. Among them were: John Bohnet & Company began producing commercial bodies in 1919; the Allen-Russell Body Company manufactured “Greenfield Sensible Bus Bodies” from 1923-1924, as well as dump bodies and steel tank bodies for trucks; Cogswell Brothers made truck bodies from 1924-1927 but switched to the automobile repair business in 1928; and Lansing Commercial Body Company manufactured truck cabs and special truck bodies from 1923-1925. Although short-lived, the ephemeral concerns mentioned here are further evidence of an extensive secondary industry connected to the auto and truck plants of Lansing.

## **Truck Manufacturing**

In addition to the production of automobiles, Lansing played a significant role in the development of the truck manufacturing industry, which was developed for the commercial purpose of moving goods and providing services. With advances in design, horse-drawn wagons were soon to be replaced by trucks on streets and roads throughout the nation in the first decades of the twentieth century.

One of the world’s first heavy-duty truck manufacturers was established in Lansing. Founded in 1909 as the Duplex Power Car Company in nearby Charlotte (MI), the company was reorganized as the Duplex Truck Company. In 1916, Duplex moved to Lansing and built a factory (2100 S. Washington) for the manufacture of trucks. From its inception, Duplex produced an extremely powerful, heavy-duty vehicle, with many four-wheel drive models. Duplex trucks were used for many applications in construction, off-road, and fire-fighting. During World Wars I and II, Duplex also supplied trucks for military application. The original plant was sold in 1923 to the Reo Motor Car Company, which also used the facility for truck production as part of its commercial division. The building was used during World War II by the Nash-

<sup>53</sup> Hugh Lyons was a Canadian manufacturer of showcases before coming to Lansing.



*Plate 13: Duplex Truck Company, first site on S. Washington, ca. 1970s*

Kelvinator Corporation for the manufacture of aircraft propellers, and later by the Duo Therm Division of Reo for the production of oil heaters.

Following the sale of the original plant, Duplex would relocate its operations to another site in southeast Lansing (731 E. Hazel), which they leased for fifteen years and then purchased in 1938. Once occupied by the Lansing Foundry Company, the factory buildings, offices and several acres of land at this location were purchased from Ray Potter (president of the Lansing National Bank) and Harry F. Harper (president and general manager of the Motor Wheel Corporation). The site was sold in 1957 to the City of Lansing and occupied by the Board of Water and Light.

Duplex continued to produce trucks for heavy-duty applications for the next several decades, including vehicles for the Gradall division of Warner & Swasey.<sup>54</sup> In 1955 Warner & Swasey purchased Duplex. The name Duplex carried on into the 1960s, but some of the products manufactured by the company rolled off the assembly line with Gradall badges. In 1977, the company's assets were sold to the Nolan Company of Ohio, which continued to use the name Duplex for fire and airport rescue vehicles.

Another truck manufacturer can trace its lineage directly back to R.E. Olds, the father of Lansing's automobile age. After differences with the board over the direction of the Olds Motor Works, Olds resigned and launched the Reo Motor Car Company in 1904.<sup>55</sup> The venture was initially successful and, based on that success, Olds looked to expand his product line into the commercial vehicle market (also competing on yet another level with his former company). In 1910 he founded the Reo Motor Truck Company. The truck company began production in the facilities once occupied by E. Bement & Sons, Lansing's earliest important industrial operation. The Reo truck was produced there until 1916, when operations were merged with the Reo Motor Car Company and relocated to that facility. In 1924, Olds purchased the nearby Duplex site on S. Washington and moved the truck division to that location, where it operated for nearly twelve years. When passenger car production ceased in 1936, the truck operation was once again moved back to the automobile plant.

Like the immediate success of the Reo automobiles, Reo trucks were well received by the public because of their durability. Unlike other so-called "trucks" of the era – which were actually little more than commercial bodies fitted onto automobile chassis (like those offered by Oldsmobile and other auto manufacturers) – Reo trucks were produced from the ground up as trucks or heavier-duty vehicles. Another manufacturing advantage offered by the Reo truck was that nearly all major chassis components were produced by the Reo company, thus ensuring the suitability of each part, as well as better quality control. Reo trucks – including their popular Speed Wagon model – could be found on the farm or in the city, and were equipped to haul cargo, build roads, or fight fires.

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<sup>54</sup> Messrs. Warner and Swasey were machinists in Cleveland who were involved in a wide variety of work, including the initial production of the Thompson sub machine gun (Tommy gun). They were also heavily involved in World War II contract work. Looking towards diversification in the post-war era, they acquired Gradall, first developed by a construction contractor as a truck-mounted, hydraulically actuated articulated arm used for grading, digging and smoothing. Manufacturers of off-road construction equipment, the Gradall Company is currently located in New Philadelphia (OH).

<sup>55</sup> The Reo plant was located at 1331 S. Washington. Designated a National Historic Landmark, it was demolished in 1979.

While the Reo passenger car would not survive the effects of the Depression, the truck operation outlasted its parent company. The Reo truck name would continue on for several decades as the company produced heavy-duty military vehicles that saw action in World War II. The company also produced heavy-duty trucks, school buses and transit coaches. In 1957 the White Motor Company purchased Reo, and the Lansing facility produced their Diamond T, White, and Diamond Reo trucks until the factory closed in 1975.

### **First Motorized Fire Apparatus**

Certain related developments in Lansing's automobile history have had a far-reaching national impact. In 1908, Lansing Fire Department Chief Hugo R. Delfs learned of the Webb Pump Company of St. Louis and its experiments with automobile-based fire apparatus. Webb was then testing an automobile pumper that was driven by a vehicle motor. Lansing City Commissioners supported Delfs' tests on a motorized pumper; comprised of an Oldsmobile chassis outfitted with a Webb pump, it cost \$6,500. After passing a number of exhaustive tests, the unit was placed into service December 17, 1908. Lansing became the first city in the United States to purchase and place into service an automobile fire engine.

This advance in fire-fighting technology attracted the attention of fire companies across the country. The following year, on August 11-13, 1909, the twelfth annual convention of the National Fireman's Association was held in Lansing. Justifiably proud, the organizers of the convention featured a photograph of Lansing's motorized pumper on the convention badge, encircled with the words "The Great Automobile City of Michigan." While the evolution from horse-drawn, to human- or steam-powered equipment, to automobile-based motorized fire apparatus perhaps was inevitable, it was first demonstrated feasible in Lansing. Because of the results obtained here, standard methods of fire-fighting were revolutionized, and fire departments across the country began to enter the automobile age.

## ARCHITECTURAL OVERVIEW

Previous surveys in the Lansing area offer a broad overview of the city's rich architectural history, with a principal focus on the core residential and commercial neighborhoods. A study conducted by Lansing's Historic District Study Committee (1976), a multiple resource National Register nomination for downtown Lansing (Christensen 1980), and the final survey report for approximately 6,900 buildings in the city's central neighborhoods (Schneider and Sommers 1986) were early works that identified and described the dominant building styles in Lansing. These were supplemented in 1998 and in 2000 by selected area surveys (Henry and Henry Preservation and Architectural Consultants; Great Lakes Research) which expanded the architectural context to include more vernacular and working-class building types, and the work of local architects and builders. Because they incorporate almost all areas and periods encompassed in this thematic survey, the reader is directed to those earlier reports for additional information on Lansing's architecture.

The auto-related property types identified within the survey area fall into four general categories: residences; commercial outlets for automobile sales and parts; auto service and repair facilities; and buildings intended for the manufacture or production of automobiles or their component parts. Some of these properties – especially the homes of Lansing's industrial leaders – assume the characteristics of prevailing national tastes or styles in their design. Most, however, carry none of the distinguishing characteristics of the “academic” styles. Instead, they have adopted a vernacular appearance that is more accurately described by their overall shape and massing, or by their function. Within the automotive theme, the latter category of buildings – those designed specifically for the manufacture, sale or service of cars – is the most easily-identified aspect of the industry's presence in Lansing. The following is a summary description of the architectural styles and types represented in this study, including the specialized building types associated with auto production, sales and service – structures that transcend standard architectural classification.

### **Architectural Context**

The population in Lansing jumped from 13,102 to 78,397 in the forty-year period between 1890 and 1930, due largely to the prominence of the auto industry. At its peak, the city's nine largest employers were auto-related concerns, and the prosperity associated with the industry caused a major influx of autoworkers to the city. This placed an enormous burden on Lansing's existing housing stock, and resulted in major residential development, affecting all socio-economic groups. Although the growth of working-class neighborhoods is a key component of Lansing's automotive history, the focus of this study was the leaders and innovators representing the automobile or supporting industries during that period.<sup>56</sup>

The city experienced a parallel growth in commercial development during this period, as well. With the growing popularity of the automobile, new commercial corridors were built along Lansing's major trunk roads, and within these districts new businesses were established to sell the various parts or accessories needed by motorists. Between 1890 and 1930, those products might include batteries, tires and tubes, lights, spark plugs, hoses and belts, tops, tools, automobile trunks, and endless replacement parts and accessories. The sale of these products differed little from the sale of other consumer goods, and until wide-scale corporate design was adopted by the auto supply industry for universal brand recognition, it resembled any other commercial building of the period.

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<sup>56</sup> While acknowledging the importance of the auto worker in Lansing's history, and the enormous impact of the working class in shaping the city, it was not within the scope of this project to explore their contributions. The topic of working class neighborhoods in Lansing established in relation to the auto industry is nevertheless an important one that should be addressed in future studies.

## Residential

Within the scope of this project, nine residential properties were surveyed. All but one were homes of leaders, founders or directors representing the automobile or supporting industries. While many early leaders in the auto industry came from humble beginnings, the more successful of them went on to accumulate great fortunes. The homes they built became symbols of their hard-earned wealth and social achievement, and typically followed the most current fashions and trends.

### Gabled Ell

The Gabled Ell is a post-Civil War house type that features a one- or two-story, gable-front upright with an intersecting gabled wing of the same height. The footprint of the Gabled Ell is typically L- or T-shaped. In urban settings (where lots are narrow), the gabled upright commonly runs perpendicular to the street. A porch is often located along this longer wing. The shorter intersecting wing (parallel to the street) has one or two bays. A main entry is rarely located in the gable end, but rather on the side façade or projecting wing. With the coming of railroads, lumber became more readily available in the Midwest states, and the growing popularity of balloon framing allowed for cheaper and faster construction. The Gabled Ell also offered greater and more flexible living space than other folk housing. Combined, these factors led to widespread use of this vernacular building type in both urban and rural settings.

Builders were able to embellish this popular plan type according to the owner's particular taste or budget. Details might include decorative shingles, braces, bay windows or variegated wall treatments. Applied for stylistic effect, the results could be widely varied. The Charles Blades house (230 S. Butler), for instance, represents a fairly restrained example of the type. Charles Henry Blades came to the U.S. from England in 1864. His family settled near Howell (MI), where he later became a blacksmith's apprentice and a baseball pitcher of some fame.<sup>57</sup> In 1881,



*Plate 14: Charles Blades house at 230 S. Butler*

Blades started work as a blacksmith at Clark & Son carriage works in Lansing, and in 1883 is listed in the city directory as an employee of E. Bement & Sons. He worked with R.E. Olds on the development of a steam-powered automobile in 1887, and as a blacksmith with the Olds Motor Works is credited with forging the front axle for Olds' first gas-powered automobile in 1896. In 1939 he was honored as the longest-serving and oldest employee with the company (which by that time had become the Oldsmobile division of General Motors). He retired in 1940, and died at his home in 1946. The residence (ca. 1888) is a wood-framed Gabled Ell with restrained Stick style details that include decorative bargeboards and vertical flat stickwork in the gable ends (on the south and east elevations). It is a two-story structure with cross gables, several open porches, and hipped front (east) bay window. In 1935 it was identified in Assessor's notes as a double house. Aside from some material alterations and porch additions, the building maintains its essential shape and form.

<sup>57</sup> Newspaper clipping from the CADL/FPML vertical files.

## Italianate

The Italianate style emerged in the 1840s and dominated architectural design in Michigan until 1880. Based on romantic interpretations of the farmhouses and villas of Tuscany, Umbria and Lombardy, the Italianate style was well represented on the pages of pattern books, and was adopted in several forms for country homes, urban row houses, commercial and industrial buildings, and train stations of the time.<sup>58</sup> Domestic examples have a low-pitched hipped roof with cupola or belvedere, deep overhanging eaves supported by scroll-sawn brackets, tall arched windows with bracketed or pedimented hoods, polygonal bay windows and towers, and a generous veranda or centered porch. Massing is boxy in early examples, becoming more asymmetrical later in the nineteenth century. Buildings in this style are almost always two or three stories tall.



*Plate 15: James Seager house at 533 S. Grand*

The James Seager house at 533 S. Grand exhibits details of the Italianate style. Originally built in 1877 for Alvin Whitehead, one of Lansing's early merchants, it was occupied by Seager from around 1904 to 1930. A native of New York, Seager attended Michigan Agricultural College in 1863-64, and served as paymaster's clerk during the Civil War. After the war he became a bank cashier in Kansas, and in 1870 was involved in the construction of the Arkansas Central Railroad. Returning to Michigan in 1871, he established a general store in Houghton and was

president of the National Bank there. During the 1870s he served as president of the Copper Range Railroad, and president of the Portage Lake Foundry & Machine Company. He was also involved in the Copper Range Mining Company and Baltic Mining Company, and helped develop the mining industry of the Upper Peninsula. Around 1902 Seager came to Lansing, where he worked as general manager of Olds Gasoline Engine Works. He subsequently became president of the Seager Engine Works, successor in 1903 to the Olds company, where he also served on the board of directors. By 1910 it was the largest of seven gasoline engine manufacturers in Lansing. He retired in 1915, and lived in this home until c. 1930. Seager's two-story brick house is a Gabled Ell that features elaborate Italianate details, including a bracketed cornice, wide overhanging eaves, segmental-arched stone hoodmolds with incised decorations, and a two-story bay window. It features a full-width porch on the front-facing gable that was reconstructed in 1999 to closely duplicate an original porch that was removed in the 1940s. The whole sits on a handsome stone foundation.

## Queen Anne

Widely adopted by the mid-nineteenth century, balloon framing techniques allowed greater flexibility in building design, and the Queen Anne style fully exploited that invention. A product of the Victorian era, the style was most widely associated with English architect Richard Norman Shaw, whose work frequently appeared in architecture magazines, pattern books, and carpenter guides in the 1870s. It was also advanced through the 1876 Centennial Exhibition in Philadelphia, where several

<sup>58</sup> Stephen C. Gordon, *How to Complete the Ohio Historic Inventory*, (Columbus: The Ohio Historical Society, 1992), p. 85.

English buildings designed in the Queen Anne style were exhibited. The style in fact borrowed little from the Renaissance architecture that dominated during the reign of Queen Anne<sup>59</sup> but drew instead from an eclectic mix of earlier Medieval sources, including Classical, Tudor, and Flemish architecture.<sup>60</sup>

The Queen Anne style was the dominant style of domestic building by the turn of the twentieth century, and was equally adapted to rural and urban settings. Earliest American examples featured the half-timbered design introduced by Shaw, but by the 1880s a spindlework interpretation was more widely favored. The asymmetrical composition is comprised of a variety of shapes, textures and colors. Architectural parts include projecting oriels and bay windows, towers and turrets, balconies, porches and verandahs, molded brick and terra-cotta wall finishes, patterned shingles, and a variety of turned wood ornamentation. In the 1880s and 90s, high-style examples were mostly executed in masonry. The style continued in popular use into the 1920s through mail-order catalogs.

Lacking the decorative features more commonly associated with the Queen Anne style, a complex roofline and irregular massing are the key defining features of the Burton S. Gier house at 301 N. Sycamore. Built in 1884 (and remodeled in 1926) it is a one-and-a-half-story brick residence. It is front-gabled and has a steep-pitched roof with multiple cross gables. Porches on the front (east) and rear (west) elevations are hipped and supported by plain Doric columns, and there is a first-floor bay window on the street-facing side (south) elevation. A wood-framed, gabled wing on the north elevation contains an open porch (first floor) and sleeping porch (second floor). Windows are flat-arched, but have arched stone hoodmolds that hint of Italianate influence. Alterations to the building are largely superficial and do not detract from its overall integrity.

Burton S. Gier occupied this home from ca. 1906 to 1926. Gier came to Lansing in 1905 as sales manager of the Lansing Wheelbarrow Company. In 1908 he formed a partnership with Elmer I. Dail under the name of Gier & Dail Manufacturing Company. The principal product of that company was postcard racks and light pressed-metal parts. The partnership dissolved in 1913, and two years later Gier established the Gier Pressed Steel Company, which manufactured both light and heavy pressed-metal parts, particularly for automobiles. In 1916 a new Gier plant was constructed at 1508 N. Larch Street, and in 1920 the company merged with the Prudden Wheel, Auto Wheel, and Lesh Manufacturing companies to form the Motor Wheel Company. Gier was vice-president and treasurer of Motor Wheel until 1928, when he retired due to illness. He also served as director of the Capital Nation Bank of Lansing, secretary and treasurer of the Lansing Home Building Company, and secretary-treasurer of the Steel Wheel Corporation, in addition to numerous other civic and social aid organizations. He occupied the home on Sycamore until his death in 1928; his wife continued to occupy the home until 1941.



*Plate 16: Burton S. Gier house at 301 N. Sycamore*

<sup>59</sup> The reign of Queen Anne lasted from 1702 to 1714.

<sup>60</sup> Virginia McAlester and Lee McAlester, *A Field Guide to American Houses*, (New York: Alfred A. Knopf, 1986), p. 268.

## Colonial Revival

The Colonial Revival style first appeared in the early 1880s. It followed on the heels of the Philadelphia Centennial of 1876, which signaled a new pride in America's past and a desire of architects and builders to recapture our colonial heritage. Turning to the architecture of the original Colonies for inspiration, architects of the style borrowed heavily from the vocabulary of Georgian and Federal classicism. Early examples were typically larger homes in affluent neighborhoods, and were often designed on an exaggerated scale, using the irregular massing and sweeping porches of the Queen Anne and Shingle styles, with Palladian windows and Classical detailing such as swags and urns. Later, the style shifted to carefully researched copies with more correct proportions and details.<sup>61</sup> Built from 1910 to the 1930s, these academic examples emphasized the rectilinear, symmetrical lines of English and Georgian prototypes, with accentuated front doorways with (pedimented) porticos, hipped or gable roofs with dormers, columns, and multi-pane double-hung sash.<sup>62</sup> Colonial-inspired details were freely applied to other common house types of the period, including high-style and vernacular examples. The later Minimal Traditional style also borrowed elements of Colonial Revival detailing and massing.



*Plate 17: Historic view of Elmer Dail house at 1204 N. Genesee*

Within the study area, an outstanding example of the Colonial Revival style is the Elmer Dail house at 1204 N. Genesee. Located in the fashionable Westmoreland neighborhood, the house was built for Dail in 1922. Trained as a civil engineer, Dail worked briefly for the Gier & Dail Manufacturing Company before becoming manager of the Jarvis Engine & Machine Works in 1915. Derived from the Lansing Iron & Engine Works, and founded in 1893, Jarvis specialized in steam engine and boiler work, in addition to a general machine shop business. With the shift from steam to electrical power,

<sup>61</sup> McAlester and McAlester, *American Houses*, p. 326

<sup>62</sup> Rachel Carley, *The Visual Dictionary of American Domestic Architecture*, (New York: Henry Holt and Company, 1994), p. 188.

the company turned to structural steel fabrication and in 1922 was renamed Jarvis Engineering Works. In the 1920s the company was one of the pioneers of the structural steel business in central Michigan. Dail occupied this home through the late 1940s, just a block east of his brother Ernest's home at 1306 N. Genesee. A two-story brick veneer and stucco building, it has a symmetrical facade, with a center entry porch and a one-story porch wing on the side (east) elevation. Half-timber details are located on the gable ends. The eyebrow dormer and projecting dormers are typical of the side-gabled Colonial type. The photograph, on the previous page, shows the building in its original condition, before it was painted (date of alteration is unknown).

### Dutch Colonial Revival

As the Colonial Revival movement spread, architects sought to expand the vocabulary of that period style. Around 1900, they began to incorporate features of the seventeenth- and eighteenth-century dwellings of the Hudson Valley.<sup>63</sup> First designed for country homes in the fast-growing regions outside Philadelphia, New York City, and southern Connecticut, the Dutch Colonial Revival reached its peak popularity among middle-class urban and suburban families throughout the country in the 1920s.

Often constructed of stone on the first floor and clapboard or shingles in the second, these homes are distinguished by a signature gambrel roof with deep (often flared) eaves. Early examples from circa 1895-1915 commonly have front-facing gambrel roofs.<sup>64</sup> Cross-gambrel models, a carryover from the earlier Shingle style, appear in the teens with a mix of applied Colonial Revival and Craftsman details. By the 1920s, the side-gambrel shape is the most common form, most often with a full-width shed dormer. Offered through mail-order catalogs and plan books until 1940, these later examples



Plate 18: Harris Thomas house at 1712 Jerome

incorporate Colonial Revival features such as classical columns and symmetrical facades.<sup>65</sup> Doorway hoods and facing porch benches are common "Dutch" details.

The single example of the Dutch Colonial Revival style identified in this survey is the Harris Thomas house at 1712 Jerome. An attorney and investor, Thomas was a founder of the Lansing Spoke Company (forerunner of the Auto Wheel Company) in the 1890s. He was made vice-president of the Auto Body Company in 1901, the first company in Lansing

established specifically for the manufacture of auto bodies. He was also a vice-president of the New Way Motor Company, and in 1902 was president of the Lansing Businessmen's Association, the organization largely responsible for bringing R.E. Olds back to Lansing from Detroit. Born in 1859 in Kent County (MI), Thomas was a graduate of the Michigan Agricultural College in 1885, and in 1891 completed coursework in law at the University of Michigan. He entered the legal profession at

<sup>63</sup> G. Bock, "Dutch Colonial Revival (1900-1945)," *Old-House Journal*, Vol. XXIX (No. 2), p. 69.

<sup>64</sup> McAlester and McAlester, *American Houses*, p. 322.

<sup>65</sup> Gordon, *Ohio Historic Inventory*, p. 104.

that time, and in the 1890s was elected to two terms as circuit court commissioner. He was a member of the law firm of Thomas, Shields & Silsbee, and for several years served on the executive committee of the Businessmen's Association,<sup>66</sup> a position that offered numerous opportunities for involvement in local business development. Built in 1924, the Thomas house has the side-gambrel form that was most popular during that decade, with flared eaves, a full-width shed dormer, and a large exterior chimney on the west gable end. The application of aluminum siding over the original wood siding has not significantly impacted the historic integrity of this modest building. Thomas occupied the home from 1924 to ca. 1935.

## **Tudor Revival**

The high-style Tudor Revival house of the late nineteenth and early twentieth centuries derived primarily from English Renaissance building of the sixteenth and early seventeenth centuries.<sup>67</sup> Architects designed the first generation of Tudor homes for wealthy clients, but by the early twentieth century the Tudor Revival style was more widely adapted to the middle-class suburban house.<sup>68</sup> Offering an illusion of English aristocracy, the buildings feature steep front-gabled roofs, casement windows, heavy elaborated chimneys, and decorative half-timbering. The Tudor arch may also be a prominent feature. Brick, stone, wood and stucco – often in combination – are common exterior wall finishes for early, high-style examples. With advances in masonry veneering techniques, the style became more widely accessible in the 1920s and 30s.<sup>69</sup>

Two outstanding local examples of early Tudor Revival estate homes stand side by side in the exclusive Cambridge Road neighborhood in southwest Lansing.<sup>70</sup> This subdivision was conceived of and developed in the 1920s by twenty-two members of the nearby Country Club of Lansing, who established deed restrictions that allowed them to set the price for lots and reserve the right to approve buyers. The street plan – which featured winding roads lined with elm trees (no longer standing) – was created by American Park Builders of Chicago. Five grand homes were built here in the 1920s, prior to the Depression. These include the Harry Harper house (1408 Cambridge) and the Ray Potter house (1348 Cambridge), both of them significant figures in the emerging auto industry in Lansing.

The Potter house was built in 1926 for Ray Potter, the son of James W. Potter. The father made his fortune in lumber and furniture making, and later moved to banking and real estate. The son followed in his father's footsteps, eventually becoming president of Lansing National Bank. In that capacity, he was involved with major real estate and business investments throughout the city. In 1911, young Potter joined "some of the familiar industrial pioneers in the city" as a founder of the Gier & Dail Manufacturing Company.<sup>71</sup> With Harry Harper, he was also a stockholder in the Lansing Foundry Company. Upon the closure of that company they purchased the foundry site and buildings on Hazel Street, which they sold in 1938 to the Duplex Truck Company.

The Potter house is a sprawling two-and-a-half-story residence with a steeply pitched side-gabled roofline, and a prominent cross gable with extended wing wall. The first floor has a brick veneer finish; walls above are stucco with decorative half-timbering. There is a massive exterior chimney with corbelled cap on the east gable end. The front doorway opening is Tudor-arched. Picturesque casement windows with multi-pane glazing are grouped in strings of three or more. The Potter house

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<sup>66</sup> The organization later became the Lansing Chamber of Commerce.

<sup>67</sup> Carley, *American Domestic Architecture*, p. 200.

<sup>68</sup> P. Poore, "American Tudor (1895-1945)," *Old-House Journal*, Vol. XXVIII (No. 4), p. 75.

<sup>69</sup> McAlester and McAlester, *American Houses*, p. 358.

<sup>70</sup> Information is taken from an undated manuscript entitled "Cambridge Road Area History" by Elizabeth Lisle Sessions, on file in the local history collection at the Capital Area District Library in Lansing.

<sup>71</sup> "Dail Steel Makes Varied Products" *Lansing State Journal*, Sept. 12, 1948.

is a textbook example of the early high-style Tudor design, and the building and surrounding landscape retain a high degree of historic integrity.

The Harper house is the largest in the neighborhood, and was built in 1927-29. Designed by Detroit architect Harold Beckett, it is a two-story masonry building with stone wall cladding. The roof plan is irregular, with a hipped center block and gabled side wings (north and east elevations). A round tower with conical roof is located at the juncture of the two wings on the street-facing elevation. The principal entry (with open porch) is located on the side (south) elevation, overlooking a circular drive and adjoining a detached three-bay garage. The roofing material is slate, and the eave line is punctuated with a variety of cross gable and inset dormers. Multi-pane casement windows are clustered into groupings and set within stone surrounds. There are several tall stone chimneys with decorative chimney pots. Tudor half-timbering is evident on the dormer walls on the garage, a theme that is repeated in detailing throughout the surrounding gardens and grounds.



Plate 19: Harry Harper house at 1408 Cambridge

Harry Harper was among Lansing's most prominent industrialists and civic leaders. Born in Wisconsin, Harper came to Lansing in 1903 and took a job as bookkeeper and shipping/receiving room clerk with W.K. Prudden & Company. He was subsequently appointed secretary of the company, and in 1916 was made president of the Prudden Wheel Company (successor to the parent organization). When the Motor Wheel Corporation was organized in 1920, he was named president and general manager, a position he held until his retirement in 1946. He also helped to organize the Duplex Truck Company, and was associated with a variety of other business, civic and charitable enterprises. The home he occupied until his death in 1949 is significant both historically and architecturally.

### Arts and Crafts/English Cottage

The English Arts and Crafts movement originated in England in the 1890s. A major proponent of the movement was English designer William Morris, who wrote and lectured extensively on the need for reform in the arts. Morris urged craftsmen of the period to look at buildings, furnishings, and other household goods as subjects worthy of artistic expression. Architects who adopted the Arts and Crafts aesthetic rejected classically inspired art and the machine-made products of the Industrial Revolution in favor of design based on structural honesty, natural materials, and fine craftsmanship.<sup>72</sup> In America, publications like *The Craftsman* helped broaden the popularity of the style.<sup>73</sup> Architects working in the Craftsman style were regularly featured in professional and popular magazines in the first decades of the twentieth century. From pattern books and through mail-order building catalogs, the style was adapted for countless small houses and bungalows in this country. High-style examples were designed for a more affluent clientele.

<sup>72</sup> Gordon, *Ohio Historic Inventory*, p. 102.

<sup>73</sup> *The Craftsman* was published by furniture designer Gustav Stickley from 1901 to 1916.



*Plate 20: Ernest Dail house at 1306 N. Genessee, photo ca. 1922*

The Arts and Crafts movement found inspiration in local traditions, and some late-nineteenth century English architects looked to their own vernacular cottages as a source for design. The work of these architects strongly influenced American domestic building. Coinciding with a parallel interest here in historic period styles, several American architects began designing houses in the English Cottage style in the early 1900s.<sup>74</sup> Based on Arts and Crafts design principles, this style is immediately identifiable by the rolled eaves of the roof, an imitation of the traditional thatched roof. Other characteristic elements included a medium-pitched gable roof, prominent chimney (frequently with compound flues), asymmetrical plan, small-paned windows, dormer windows, and picturesque details.

In Lansing, a textbook example of a high-style English Cottage is the residence of Ernest Dail at 1306 N. Genessee (depicted above, ca. 1922). Constructed in 1921, it is among the oldest homes in the Westmoreland neighborhood in west Lansing. Visually arresting for its numerous fairy-tale qualities, it is an L-shaped wood frame building with coursed rubble stone walls. The roof has rolled eaves and eyebrow dormers, and has decorative wood braces beneath the eaves. An oversized stone chimney with terra-cotta flues is located at the inside juncture of the two intersecting wings. The front gable is dominated by a two-story arched opening that contains five small-paned casement windows at each level; the spandrel that separates the windows is half-timbered, with a pebble-dash wall finish. There is a small arched window in the gable end, and the doorway beside it has a braced, arched hood above the main (south) entrance. The house originally had a cedar shake roof (since replaced with asphalt shingle), and in 1950 the kitchen and bathroom were remodeled. The house is otherwise intact, and is an outstanding and rare example of its kind.

<sup>74</sup> Rosalind Clark, *Architecture, Oregon Style*, (Portland Oregon: Professional Book Center, Inc., 1983), p. 154.

Built in 1921, the home was owned and occupied for over twenty years by Ernest Dail, president of the Dail Steel Products company. A job-shop stamping plant, the company was founded in 1911 and reorganized in 1913 by his father, Ernest I. Dail. The company produced stampings for the automotive, agriculture and home appliance industries through the 1960s. Dail lived in this home until ca. 1940. His wife remained in the home until ca. 1950, when she remarried. The house is located about a block west of brother Elmer Dail's home at 1204 N. Genesee.

### **American Foursquare**

Several early prototypes for the American Foursquare appeared in American publications in the 1890s. Advertised as a cheap, safe, and straightforward housing alternative, the Foursquare appealed to the need for stability and solidity that was elsewhere satisfied by period revival architecture.<sup>75</sup> By the turn of the century, every mail-order company offered variants of the style, and the Foursquare flooded the landscape of the American suburb.<sup>76</sup> One of the most versatile of house types, it was also one of the most popular in the first two decades of the twentieth century.<sup>77</sup>

The basic Foursquare is two or two-and-a-half stories tall, has a nearly square floor plan and cube-like massing, sits on a raised foundation, and is capped by a low-pitched hipped roof, often with dormers. Each floor in the Foursquare is divided into four nearly equal sized rooms, with a side stairwell. On the front elevation, a full-width porch is common and often features key stylistic details. Local builders could customize these homes, changing the construction materials or adding decorative or stylistic embellishments, such as multiple cladding materials or picturesque windows.<sup>78</sup> In the early 1900s, a Foursquare constructed of cement block was also marketed as an economical "fireproof" choice for the small suburban house.<sup>79</sup>

Within the project boundaries is located one of the most common vernacular versions of the Foursquare type. Sometimes known as the Prairie Box, it is a two-story, orange brick veneer building with a simple square plan, low-pitched hipped roof, and symmetrical facade. It has a full-width, hipped front porch supported by large brick corner piers. The roof is covered with red clay tile and it has four hipped dormers, referencing both Prairie and Mission styling. On the rear (north) elevation is an attached garage and sleeping porch. Located at 1701 Jerome Street, the house was built in 1918 and occupied by Hugo Lundberg. Lundberg came to Lansing in 1906 and with R.E. Olds, Richard Scott, and Ray Potter helped organize the Michigan Screw Company, manufacturers of precision parts for the automobile and gas engine industries. He served as president and general manager of the company, but in 1927 the Michigan Screw Company was sold to Federal Screw.



*Plate 21: Hugo Lundberg house at 1701 Jerome*

<sup>75</sup> Alan Gowans, The Comfortable House: North American Suburban Architecture 1890-1930, (Cambridge, Massachusetts: The MIT Press, 1986), p. 84.

<sup>76</sup> *Ibid.*, p. 87.

<sup>77</sup> Gordon, Ohio Historic Inventory, p. 137.

<sup>78</sup> G. Bock, "The American Foursquare (1890-1935)," Old-House Journal, Vol. XXIX (No. 5), p. 67.

<sup>79</sup> Carley, American Domestic Architecture, p. 219.

Lundberg was briefly involved with the Driggs Aircraft Corporation,<sup>80</sup> and then in 1933 founded the Lundberg Screw Company.<sup>81</sup> A local civic and business leader, Lundberg spent most of his productive years in this home, where he lived until the time of his death in 1967.

## Commercial Buildings

### Mission/Spanish Colonial Revival

Concurrent with the occurrence of other period revival styles in the late nineteenth century (such as the Colonial Revival and Tudor Revival) was the Spanish-inspired Mission style. Introduced by California architects in the late 1880s and early 1890s, it represented a loose adaptation of features found on Spanish Colonial mission buildings, such as smooth plaster walls, arched windows, curving parapets, and low-pitched tile roofs. An indigenous southwestern style and a staple of the mail-order catalogue house market, it was most frequently found in suburban settings.

In 1915 the California-Pacific Exposition opened in San Diego to inaugurate the Panama Canal. The exposition's lead architect, Bertram Grosvenor Goodhue, designed for this event the white stucco and red-tiled California Building. Widely admired and imitated, his design introduced a more academic and sophisticated adaptation of Spanish Colonial architecture, borrowing elements of Moorish, Byzantine, and Renaissance detailing. Signature features include a low-pitched roof with shallow eaves, stucco wall finish, red or orange barrel-tiled roof, porch or pergola on side elevations, and asymmetrical facades. In comparison to the earlier Mission style, arches are confined principally to major openings; rectangular casement windows and elaborate doorway openings are more typical of the Spanish Colonial style.

Although the incidence of these styles was principally confined to the Southwest states and to California and Florida, it was used in the 1920s by the Standard Oil Company for their filling stations.<sup>82</sup> Within the scope of this survey, the single example of this picturesque revival style is the Standard Oil filling station at 1501 S. Washington Street. Built in 1923, it is a modest thirteen-by-eighteen-foot brick structure, with an off-center entry, stone belt course and sills, deep overhanging eaves, and orange clay tile roof. In 1974, original pumps, lights and signs were removed, and the building was converted to a barber shop. Despite these alterations, the building retains a high degree of physical integrity. The gas station is significant for its extended period of service – in the face of radical changes in retail



*Plate 22: Standard Oil Company filling station, constructed 1923*

<sup>80</sup> Driggs was a pioneer in the manufacture of airplanes, and briefly produced a sport model in Lansing called the Skylark before the 1929 stock market crash forced the company out of business.

<sup>81</sup> The Lundberg Screw Company was first located in the former Ideal Power Lawn Mower Company building at 700 E. Kalamazoo, then leased space from the Novo Engine Company on Porter Street, and finally constructed its own building at 2015 Willow Street in 1946.

<sup>82</sup> The premiere example of this type in Lansing is the Standard Oil Company station at 1102 S. Washington, which was previously inventoried and included in ANHA's database of sites in the Lansing Stewardship Community.

practices – and as an excellent and early example of product packaging on the commercial roadside landscape.

### Commercial Brick

The introduction of streetcar lines and automobiles created a boom in commercial development at the turn of the twentieth century, and introduced new patterns of movement and streetscape design. As these vehicles accelerated the pace of movement, travelers “became focused on a narrowing, horizontally defined visual plane” along the street.<sup>83</sup> Coupled with stylistic trends that rejected elaborate and intricately detailed architecture, building surfaces became simpler and smoother at this time. For commercial applications, the result is commonly referred to as the Commercial Brick style.

A building of this type is characteristically two or three stories tall, with retail space at first-floor lower level and residential space above.<sup>84</sup> It is oriented directly toward the street. Decorative effects are often achieved simply through subtle geometric brick patterning or the use of contrasting colors or textures, although elements of the prevailing architectural styles might also be incorporated. Devices such as corbelled cornices and recessed panels, raised parapets, and contrasting trim are selectively applied. The Commercial Brick style was eventually replaced in the mid-twenties by the more stylized and abstracted Art Deco and Art Moderne styles.



*Plate 23: Example of the Commercial Brick style at 1122 N. Washington*

Within the study area we found a variety of Commercial Brick building types. The simplest of these were retail businesses that were distinguished by simple corbelled or patterned brickwork. One fine example is the Central Garage, a one-story building at 1122 N. Washington. Constructed in 1914, it has a three-bay facade with single off-center entry, large center display window (partially infilled),

and garage door opening. The storefront is defined by four raised pilasters, and each bay contains a single recessed panel and corbelled cornice.

A small auto-oriented business district on N. Larch, immediately north of E. Michigan, also contains an interesting collection of three Commercial Brick buildings, representing sales, service and commercial operations. Together they illustrate the similarities of this all-inclusive building style, as well as the subtle variances that differentiated them. The Fleming Motor Sales building (112 N. Larch), the oldest of the three, was constructed ca. 1920. It is a two-story brick structure, and has a flat parapet wall with tile coping and large display windows. Windows at second-floor level are flat-arched and fixed (not historic), with stone sills and a continuous soldier-course header. The H & H Body Shop (130 N. Larch), is a two-story brick structure that was built in 1927. The facade has a parapet wall with raised pediment and end piers, contrasting stone trim, and oversized second-floor windows (enclosed in brick) with stone sills. A cast stone panel set into the pediment identifies it as

<sup>83</sup> Richard V. Francaviglia, "Main Street: The Twentieth Century," *Timeline*, February/March 1989, p. 32.

<sup>84</sup> The upstairs living space was commonly inhabited by the business owner or operator.

the Bannasch Building. At ground level, the single center entry is flanked by a large display window and garage door opening (now infilled). In 1928, the Forncrook Automotive Supply Company building was constructed (124 N. Larch), but within five years was converted to other uses.<sup>85</sup> It is a tall one-story brick building. A three-bay facade is divided by piers that flank the entrance and window openings (enclosed with brick). The center raised pediment, and cast stone trim, pylons and globes are elements that reference the more streamlined Art Deco style. A warehouse addition was constructed in 1954. Collectively, these commercial buildings have been subject to considerable alteration, but they nevertheless merit additional study to determine historic associations.

### **Auto Accessories and Part Sales**

In the early days of production, automobiles were sold from factories and factory-owned stores.<sup>86</sup> But even established automakers had a hard time subsidizing their manufacturing operations and they realized the value of a strong dealer network. An automobile franchise not only ensured profits from car sales, but from parts and service as well. Many of the earliest car dealerships grew out of existing garages, where mechanics and repairmen saw firsthand the potential market for auto sales.

A major advance in early auto distribution was the independent dealership. The first one was reputedly opened in New York City in the late 1890s.<sup>87</sup> In urban settings, many dealerships were converted storefronts, but by the early years of the twentieth century the simple storefront dealership was replaced by a purpose-built auto showroom that was designed expressly for the sale and service of their product. At that time, it wasn't unusual for dealerships to sell several makes of cars, but by the 1940s dealerships were almost exclusively dedicated to a single brand. Through the first half of the twentieth century, showrooms were commonly located on principle thoroughfares in downtown locations, but beginning in the 1950s they were gradually replaced by large-lot suburban dealerships. In Lansing, this movement to the urban fringe began in 1960 when Story Oldsmobile left their downtown location on S. Capitol for a site near the outlying Frandor Shopping Center on E. Michigan.

Within the parameters of this study, the typical automobile showroom was a one-story, rectangular brick building. The building fronted directly onto the sidewalk, and was divided into functional parts. At one end of a new car showroom was the display area, with its own entrance door and large, full-height display windows. At the other end of the structure was the service area, identified by a large garage door opening behind a single curb cut.

In the display area, windows were the dominant feature and were commonly plate glass. These windows were intended to showcase the dealer's latest product, and in some cases nearly all of the building frontage was used for showroom display. In the service section, the window treatment was more subdued. Typically flanking the doorway, these windows were smaller and utilized glass block or multi-pane steel sash to allow diffused light into the work area. Rather than display windows, the dominant feature here on the service bay was the vehicle entrance. This secondary entrance led to an enclosed driveway that took customers to the service area behind the showroom. The persistence of this front service entrance in dealership design can be construed as a marketing message, reminding motorists that along with new car sales, the dealership also offered service. The sale of used cars was typically confined to an open lot adjacent to the main building.

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<sup>85</sup> The building was subsequently occupied by the Michigan State Unemployment Office in the 1930s and 40s, and by the Abrams Aerial Survey Corporation from the 1950s to the present. Abrams was a pioneer in the field of aerial photography and its applications for highway planning.

<sup>86</sup> A local example of early company sales distribution is the Durant Factory Showroom at 1901 W. Saginaw, previously identified in the ANHA inventory.

<sup>87</sup> Robert Genat, *The American Car Dealership*, (Osceola, Wisconsin: MBI Publishing, 1999), p. 17.

There are three examples of showrooms identified in this survey that represent this early history. Despite some alteration (principally the enclosure of display windows), they retain considerable historic fabric, and the different areas of specialized use within them are still clearly discernable. The Dean & Harris showroom (1127 N. Cedar) was established in 1923 by Roy Dean and D.D. Harris. The first business owned by the partners was established in Webberville in 1915, but was moved to Lansing when Ford Motor Company authorized establishment of a franchise there. Dean & Harris became one of the top dealerships in the Ford organization, and they operated at this location through the 1960s. The one-story Commercial Brick building has a gabled roof, front parapet wall with stone finials and coping, decorative recessed panels in the front cornice, and a corbelled cornice. The storefront treatment is unusually exotic and includes rusticated masonry pilasters and doorway surround. An adjoining storefront (for the sale of Fordson tractor equipment) was added in 1945 and remains in excellent condition. A three-bay garage was also added in 1929, but has since been removed.



*Plate 24: Dean & Harris auto showroom at 1127 N. Cedar*

Raymond Chevrolet Sales (1213 Center) is of roughly the same vintage. It is a one-story Commercial Brick structure constructed of concrete block with brick veneer, with minimal decorative features. The structure was built in three phases. The original L-shaped salesroom (at the north end of the building, also used for tire and battery service) was completed in 1924. A rear addition was constructed in 1926, and in 1928 the building was expanded to the south for additional office space, resulting in the current rectangular building footprint. The building has a plain front parapet wall and full-width metal awning, with raised brick along the cornice and vertical piers. Raymond Chevrolet occupied this space until the mid-1930s, when it became a machine and tool company (1939), heating and ventilating company (1945), and heating and plumbing supplier (1953).

Built in 1926, Abel Motor Sales (726 E. Michigan) represents an early form of auto dealership. Unlike the large suburban lots of today, the salesroom is located in an urban setting on E. Michigan that was deliberately selected because of that street's fast growing importance as the city's principal business thoroughfare. The building originally offered a salesroom, office, completely equipped service garage, and adjoining used car lot. It was subsequently occupied by Studebaker dealers W.H. Paul (1933), E.H. Bayes (1937), and Al Hansen (1945-63). A single-story Commercial Brick building, it has a parapet wall with geometric patterned brickwork, and decorative tile inserts and cresting. Although the brick is painted, original gabled parapets have been leveled, and several windows are covered with wood paneling, the overall fenestration is unchanged and details have been preserved.

## Auto Service and Repair

In the nineteenth century, oil was refined for a number of uses, such as axle grease, lubricating oil, and lighting and cooking fuel. The Standard Oil Company was already well-established by the end of the century, offering such brand name products as Mica Axle Grease and Red Crown Deodorized Stove Gasoline. Other oil companies offered similar products under their particular brand names. Until that time, however, gasoline was still considered a waste product of the oil refining process.

The stationary engine industry, a mainstay of Lansing's nineteenth-century economic base, eventually became a major consumer of the products of the American oil industry. The earliest steam-powered stationary engines relied on oils and greases for lubrication, but utilized wood or coal to heat their boilers to raise steam; later, more efficient burners were developed that used oil, kerosene, and eventually gasoline. Technological advances like this in the stationary engine industry helped lead to the development of the gasoline-powered automobile, and a greater use for that fuel was created. With increased demand, a distribution network developed and a specific building type evolved to service those needs.

The products of the early oil companies were available through a limited number of outlets. One source was a local or regional "jobber" (distributor) who would operate out of a bulk plant facility, receiving product from the company refineries and then reselling it to the end users. Many of these transactions were of a wholesale nature, and involved large quantities of goods, but individual customers could also buy oil products at the bulk plant. In many cases, deliveries would even be made directly to the customer using horse-drawn wagons. For smaller transactions of a more retail nature, oil products were available at existing enterprises such as neighborhood hardware stores, harness shops, livery, and general stores. As automobiles created an increased demand for gasoline, those businesses expanded their product line accordingly.

Certain businesses followed the transition from the horse-drawn era to the automobile age rather seamlessly. "Soon livery owners began repairing cars in addition to boarding horses; bicycle and carriage shops became makeshift auto showrooms, and stores began selling gas along the sidewalk."<sup>88</sup> An interesting and rare example of this phenomenon is represented in the building at 1224-26 N. Turner. Built in 1911, the building was a bicycle repair shop (1913), livery and feed barn (1918-1929), and a feed barn/gas station (1929) before shifting in the mid-30s to standard retail and



Plate 25: Former hack barn at 1224 N. Turner, historic view

<sup>88</sup> Chester H. Liebs, *Main Street to Miracle Mile: American Roadside Architecture*, (Baltimore: The Johns Hopkins University Press, 1985), p. 9.

repair tenant operations.<sup>89</sup> Lacking outstanding architectural interest, the building is nevertheless a unique example of this transitional type.

At first, a hardware or livery could be pressed into service as a retail distributor simply with the addition of an above-ground storage barrel. As no pumping method was then available, gasoline would be transferred to automobiles by the barrel and funnel method – in other words, fuel would be drained from the storage barrel into a suitable vessel and then poured into the auto tank using a funnel, sometimes strained through a chamois to filter out the impurities. In 1905, Sylvanus F. Bowser developed a self-contained dispensing unit consisting of a steel storage tank and a hand-operated self-measuring pump with a discharge hose, all housed in a lockable wooden shed. This apparatus could be positioned at the curbside in front of any sort of business. A Bowser salesman is credited with coining the name “filling station” for this equipment (and thus the Bowser cabinets were clearly marked Gasolene [sic] Filling Station), the first use of the terminology that, in a few short years, would become an accepted term for a more substantial roadside building. The equipment continued to evolve, and by 1910 three major pump manufacturers – Tokheim, Gilbert & Barker, and Bowser – had introduced curbside pumps with underground storage tanks.<sup>90</sup>

The growing popularity of auto travel created an increased demand for gasoline, and the practicality and safety of curbside distribution became a pressing concern. Because the hardware stores and liveries had no provisions for off-street fueling areas, gasoline pumps usually were placed at the curb. But curbside refueling caused congestion in the street, impeding the flow of traffic. There was also a safety factor, with the risk of the curbside pump being struck by recklessly driven automobiles, creating a fire and explosion hazard. Distribution from the bulk plant presented similar drawbacks. Early automobilists could visit bulk plants for gasoline purchase, but the single motorist buying only a small quantity of fuel also caused congestion and disruption of the normal business of those wholesale facilities. Additionally, many bulk plants were located on the edge of town, making it inconvenient for motorists to obtain gasoline. As a solution to these problems, the distributors and others began to establish filling stations within towns and cities. The experience of the Automobile Gasoline Company of St. Louis was typical:

With its success in the bulk plant, the Automobile Gasoline Company decided to enter into direct gasoline distribution for cars. On an ordinary city lot, the company constructed a small brick building, paved the yard behind, and erected four gas pumps ... This combination of features – modern pumps supplied by underground tanks, which fed directly to the auto; office building; paved, drive-through lot – was the prototype of the modern gas station, a drive-in store responding exclusively to the requirements of the automobile.<sup>91</sup>

The widespread use of curbside pumps allowed greater freedom of location. In some cases, however, drive-in filling stations were built adjacent to the bulk plants. Two facilities identified within the survey area are arranged in that manner: the Cities Service Oil Company (711 Center) and the Standard Oil Company (410 S. Cedar). At one time, both businesses were comprised of several buildings or structures that delivered oil products at both the wholesale and retail level. Since then, the sites have been reconfigured. The Cities Service site is now comprised of only two buildings: a filling station (now an office) and a bulk loading platform. The buildings were constructed ca. 1927. They were originally

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<sup>89</sup> Although it is already listed in the National Register as part of the North Lansing Historic Commercial District, this building was include in the survey because of its unique and important associations with the automotive history that are not directly referenced in the National Register nomination.

<sup>90</sup> Scott Anderson, *Check the Oil: A Pictorial History of the American Filling Station*, (Radnor, Pennsylvania: Wallace-Homestead Book Company, 1986), p. 24.

<sup>91</sup> Daniel I. Vieyra, *Fill 'er Up: An Architectural History of America's Gas Stations*, (New York: Macmillan Publishing Co., Inc., 1979), p. 7.

operated by Wolverine Oil Company (1929), and later by Cities Service (1933-54) and Royer Oil Company (1963). Large holding tanks were originally located to the north of this site (no longer extant). The wood-framed bulk station is currently in very poor condition, and the filling station has been significantly altered.



*Plate 26: Standard Oil Company bulk facility at 410 N. Cedar*

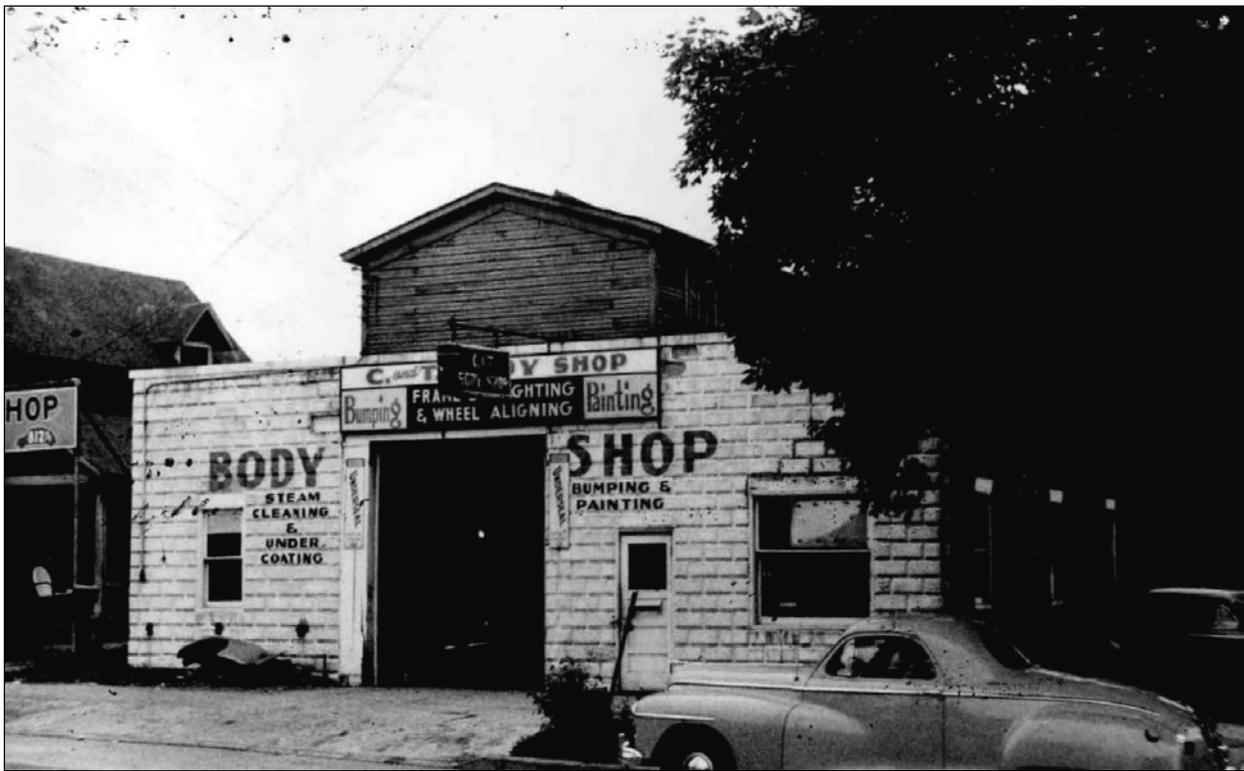
The Standard Oil Company has continuously occupied this site on S. Cedar since before 1892. Sanborn maps indicate that a service station/livery was located at the north end of the parcel on Kalamazoo in 1906, with storage tanks nearby. None of those early structures survives. The existing two-bay service garage was constructed in 1917, a single-bay garage was added in 1923, and a large warehouse structure attached in 1935. The garages were probably designed to service the Standard Company trucks that were dispatched from this location for delivery of gas and oil. The older sections of the building complex are one-story structures, with glazed face brick, tile coping, and some original steel sash windows. The two-story warehouse addition is a compatible brick structure, with no distinguishing features. Despite the recent conversion of two garage bays into office entries, the building retains a high level of physical integrity.

As a twentieth-century invention, the filling station had no stylistic precedent, and the appearance of these buildings ranged from the fantastic to the comfortably familiar before arriving at the current corporate-generated standard. The evolution of the basic form of the filling station was far steadier in the period from around 1910 to the early 1930s. During that time, a filling station basically consisted of a small building which housed an office (and possibly rest rooms); a paved driveway area with one, two, or more pumps; signage; and in some cases additional equipment such as oil dispensers and merchandising displays to round out the product offering. Because the primary purpose of the building was to sell gasoline, service areas were uncommon before the mid-20s, although an outdoor grease rack might occasionally adjoin the building. For the most part, however, the earliest filling stations did not include service bays as part of the architectural plan. Within this survey, the Standard Oil Filling Station (1923) at 1501 S. Washington stands out as an exceptional example of an unaltered early retail gasoline outlet. The station is constructed of white glazed brick with a red tile roof. It has a simple entry door and pair of double-hung windows on the front facade. Pumps, lights, and signs were removed in 1974, when it was converted to a barber shop (see Mission Style Section, page 43).

Another gasoline station included in this survey represents the next step in the evolution of the filling station concept. The Pulver Brothers Filling Station at 127 W. Grand River (1925) sold Sinclair products to Lansing motorists. Like the Standard station on S. Washington, it has no provisions for service facilities, but it does have an integral canopy that extends out to the pump island. Constructed of brick and featuring small windows and a hipped roof, the building mimics the familiar features of prevailing domestic styles of the time. This strategy was deliberately intended to minimize its visual impact, and thus counteract any opposition that might be raised by the introduction of such a building in the neighborhood. Unlike the earlier Standard Oil Station (which sits parallel to the street), this structure is

situated diagonally on the corner lot, resulting in equal exposure on the two main streets of W. Grand River and Capitol.

Before the 1920s, filling stations primarily sold gasoline and other oil products (for maintenance or repair) and there was no need for service bays. Automobile owners still looked to other types of businesses for their repair needs, and before the final shift from the horse-drawn era to the automobile age occurred, auto repairs were available from blacksmiths, carriage works and bicycle shops. From these facilities came the start of the automobile repair business, along with a host of stores and mail order houses to supply tools, parts and accessories for the more mechanically inclined automobile owners. In Lansing, a block of four buildings at 800-826 E. Kalamazoo represent this early era of single-purpose repair shops. The buildings were constructed between 1920 and 1930. They are strictly utilitarian buildings. All are one story tall and built of concrete block, each with multiple front garage doors fronting directly onto the street. They have three-bay facades, low-pitched roofs, and parapet walls. Faced with brick, concrete block, or wood paneling (not historic), alterations are principally confined to door and window openings – inserting larger doors or enclosing windows, for instance. As a potential historic district, this pocket of commerce may merit further investigation.



*Plate 27: Body Shop at 810 Kalamazoo, ca. 1940*

By the late 1930s, the retail gasoline industry experienced a market shift. In a post-Depression recovery mode, company executives and retailers looked to two new areas as a source of income to remain profitable in an increasingly competitive market: the sale of tires, batteries and accessories (TBAs), and the introduction of automobile service and repair. This shift dictated two major changes in the architectural program of roadside gasoline stations. To facilitate the display of TBA's, stations were designed with larger windows so product displays could be easily seen by motorists passing on the street or waiting at the pump island. Pits and lifts were incorporated within a station "lubritorium" so that repairs could be made on site, and service bays appeared as a standard feature of newly-constructed

gasoline stations, or were added to existing structures. Until 1937, when Texaco introduced an integrated corporate design for their gas station franchises, attached service bays were rare.<sup>92</sup>



*Plate 28: Roxanna filling station with service bays added, 410 N. Larch*

Three gasoline stations within the survey boundaries illustrate the story of that market shift. The Capitol Heights Filling Station at (1223 E. Grand River), the Roxanna Gas Station (410 N. Larch), and the Schaible Gas Station (220 E. North) were initially constructed without service bays. Like the Pulver Brothers station, they were originally small, square filling stations with a canopy extending off the front wall to the pump island. The Capitol Heights station was constructed in 1923 by John Angal,<sup>93</sup> who operated the station until ca. 1937; it was

subsequently operated by E. Lee Brown (1939), Clarence Edick (1945), Everett O. Luke (1953), and in 1963 it became the Post Spartan Service Station. The Roxanna station was built in 1928. It subsequently became a Shell station (1933) and was operated by J.R. Blankenship (1939), Clarence Eytcheson (1945), and Henry Hinkel (1953). By 1963 the station was converted to a repair shop, and was known as Henry's Carburator & Electric Service. The Schaible Gas Station was built in 1929 at a prominent corner location at the southwest corner of Turner and E. North. The business was later operated by George Pardee (1953), and is currently known as EJ's Alignment & Brakes

As gas stations nationwide began to offer service as part of their overall business format, these three 1920s-vintage Lansing stations added a two-bay service wing onto the side of the original structure. In 1931 a two-bay service wing (containing drain pits and wash rack) was added to the Schaible station, and around 1970 the hipped front canopy and gas pumps were removed. The bays were added to the Roxanna station in 1945 and to the Capitol Heights station in 1947; for both of these stations, the original projecting canopies were removed at the time of the service wing additions. In the post-Depression era, with the push to adopt a more modern look in all areas of product design, gas stations also became more streamlined architectural compositions. To achieve the cleaner look of the smooth horizontal box, designers for the oil companies often attempted to update the overall appearance of the station by removing the outdated canopy.

## **Manufacturing Facilities**

By far the most prevalent auto-related enterprise still existing in Lansing (although not necessarily operating) is the manufacturing works. Factories stood at the heart of the automobile industry in Lansing, providing nearly all the component parts and supplies necessary for the manufacture and assembly of

<sup>92</sup> In 1927, the Pure Oil Company became the first to patent a trademark station design, thus creating a corporate identity program utilizing architecture as a medium of communication, a pattern that continues today for all types of consumer markets. Service bays were not part of the design at that time.

<sup>93</sup> Angal also owned a hardware store on the adjoining lot.

cars. In the early years of the twentieth century, the Olds Motor Works was the first to build a factory that was "designed and laid out for the manufacture of the motor car."<sup>94</sup> For most companies however, the manufacture of automobiles was typically conducted in machine shops in the early twentieth century, with no special requirements as to layout or plan. As the demand for automobiles grew, and although Lansing was soon eclipsed in the area of industrial design, others in Michigan continued to introduce innovations that would ultimately revolutionize factory construction.

The layout of a factory site depended largely on the flow of production operations, the location of the plant, its power source, and the type of machinery used for moving and handling materials.<sup>95</sup> The function of the building was also a formative element. Within the realm of second-tier auto/component part manufacturers, a variety of manufacturing and finishing processes were involved. Forging, casting, stamping, and machining were among the most specialized functions. The buildings designed for these functions could be generic in some cases, or highly specialized in others. Each adopted features that indicated the operations within the building, and all fell within three general categories of building types: one-story production shed; multi-story industrial loft; and powerhouse.<sup>96</sup> The appearance of those buildings and the production activities within them were influenced by a number of technological and mechanical advances.

### **Mill Construction**

In the nineteenth and twentieth centuries, the goal of the factory designer was to incorporate the most up-to-date production methods, provide adequate space to hold the necessary equipment and machinery, and create a space that was large enough to function efficiently and easily able to be expanded.<sup>97</sup> Prior to that time, timber-framed mill construction was the standard for industrial use.<sup>98</sup> Built entirely of wood, with a frame of massive hand-hewn timbers, this method of construction was hazardous, costly, and functionally limited. When Michigan's forests became depleted at the end of the nineteenth century, builders were given even greater incentive to use masonry construction as the new preferred standard. Between 1895 and 1910, factory buildings were more commonly constructed with load-bearing brick walls, wood floors, timber beams, and interior columns of wood or cast iron.<sup>99</sup> With the addition of exterior piers for strength, the brick factory building was especially well-suited for operations using heavy suspended machinery, such as traveling cranes and monorails. This method of construction was able to withstand heavier loads and was less vulnerable to fire, however it was not entirely fireproof and the floor plan was still limited by the need for an interior support system. Irregardless, most early auto factories were masonry mill buildings.

The oldest factory identified in the survey is the Cady & Hildreth building – originally Cady, Glassbrook & Company – a cast iron foundry and machine shop at 1131 Race (see photo, next page). The building sits next to the mill race on the east bank of the Grand River, the general location of North Lansing's earliest industries. Portions of the building were constructed in the 1850s, but a fire in 1877 nearly destroyed it and resulted in major reconstruction. Occupants have included Cady,

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<sup>94</sup> Lindy Biggs, The Rational Factory, (Baltimore: The Johns Hopkins University Press, 1996), p. 88.

<sup>95</sup> In the 1800s, this included cranes, jib cranes, hoists, trollies, trams, and spur tracks. At the end of the nineteenth century, the introduction of the electric drive for both horizontal and vertical craneways had a revolutionary impact on layout, and allowed for a more efficient arrangement of machinery and workers.

<sup>96</sup> Bradley, The Works, p.ix.

<sup>97</sup> Betsy Hunter Bradley, The Works: The Industrial Architecture of the United States, (New York: Oxford University Press, 1999), p. ix.

<sup>98</sup> Mill construction is a term used to describe a slow-burning construction method, in which framing and floors are timber, and interior spaces are open and exposed enough to simplify fire-fighting efforts.

<sup>99</sup> Charles K. Hyde, "The Lower Peninsula of Michigan: An Inventory of Historic Engineering and Industrial Sites," Historic American Engineering Record (1976): p. 268.

Abfelter & Company (1892); Cady & Hildreth Company (1896); Hildreth & Company (1898); the Hildreth Motor & Pump Company (1904); Hildreth Manufacturing Company (1908); Standard Casting Company (1913); Standard Aluminum Casting Corporation (1924); and Herman Ruffer, sheet metal worker (1945). Following a renovation in the late 1990s, the only evidence of the original structure is some partial walls in the south wing of the building. These walls were once part of an early mill structure, presumably of standard mill construction. Despite these modifications, the building is listed in the National Register as a contributing element in the North Lansing Historic Commercial District.

The Lansing Motor & Pump Company building (326 S. Hosmer) is still in use, and is an outstanding example of the traditional wood and masonry type of construction. Established and built in 1905 by John Ebel, it is a simple one-story production shed of standard mill construction, with a low-pitched gable roof and segmental-arched windows. The building is comprised of two large rooms, each measuring forty-by-fifty feet. A single row of iron posts runs the length of both sections. A large machine shop and foundry was added in 1927 to the rear of the building, but was removed ca. 1976. It operated under this name through the mid-1920s, when it was renamed Ebel Hoist & Pump Company. Superior Brass & Aluminum Castings (1945-53) and Industrial Patterns (1963) were later occupants.



*Plate 29: Production shed factory at 326 S. Hosmer*

### **Steel Framing**

Just before the turn of the nineteenth century, steel framing was introduced for factory construction. Steel was able to support long spans, freeing the factory building of posts, columns, and other internal supports to create an open, unobstructed floor space. For a time, steel framing was preferred over reinforced concrete because it increased the building roof span, and was stronger and more flexible. It was especially well-suited for buildings with trussed roofs that incorporated monitors and sawtooth roofs, thus increasing natural illumination and ventilation.

The earliest metal frame building was typically a one-story structure used for heavy metal-working shops. An all-metal building – with corrugated sheet metal walls attached to the frame – was occasionally used for foundries and storage buildings. For broader applications, a self-supporting brick curtain wall was preferred, on the basis of cost, appearance, and fireproofing capacity. This concept subsequently evolved into engineered curtain walls enclosed with glass or windows. Single-story steel-framed automobile factories designed by architect Albert Kahn were introduced at Ford's River Rouge complex in 1917. Although steel frame buildings had been constructed for nearly twenty years before, the examples at Ford were designed at a monumental scale not frequently seen before. Outside of urban areas, where real estate values make it cost-prohibitive, the single-story steel frame design has since dominated industrial architecture to the present day.



*Plate 30: Steel-framed production shed at the former Novo plant*

None of the glass curtain wall types described above were identified within the scope of the project (although later examples may still exist). However, an example of the earlier steel-framed brick building can be found at the east end of the former Novo plant at 700 Porter (identified on Figure 2 as buildings 8 and 9). The building is actually comprised of two parallel sections that functioned as assembly rooms. The first section was built in 1919, and the second was added in 1920. There is no common wall between the two; instead there are brick piers

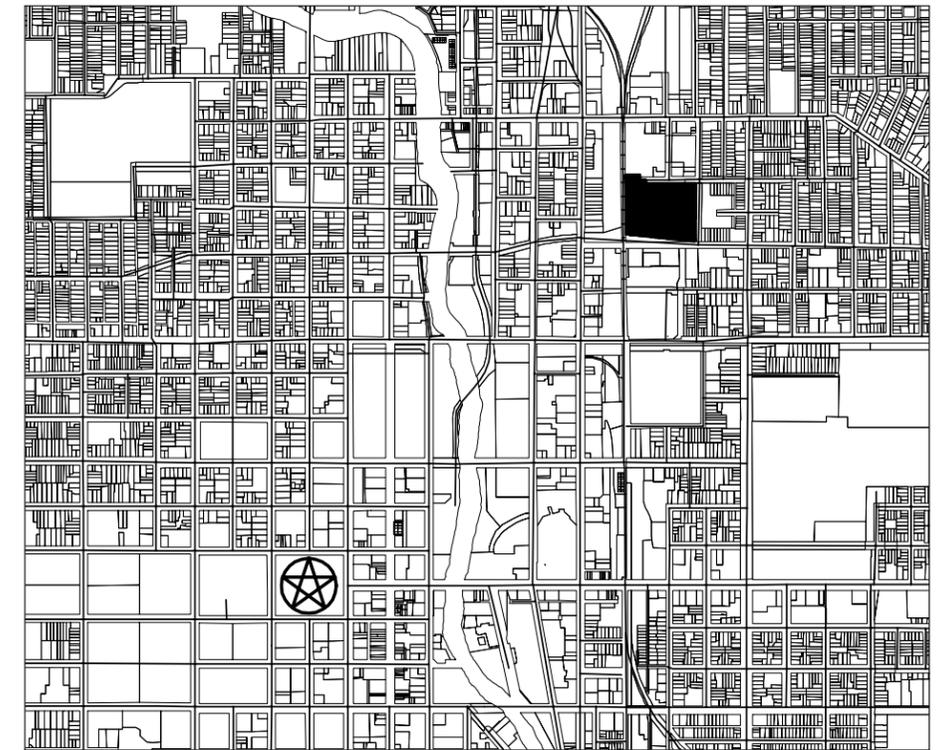
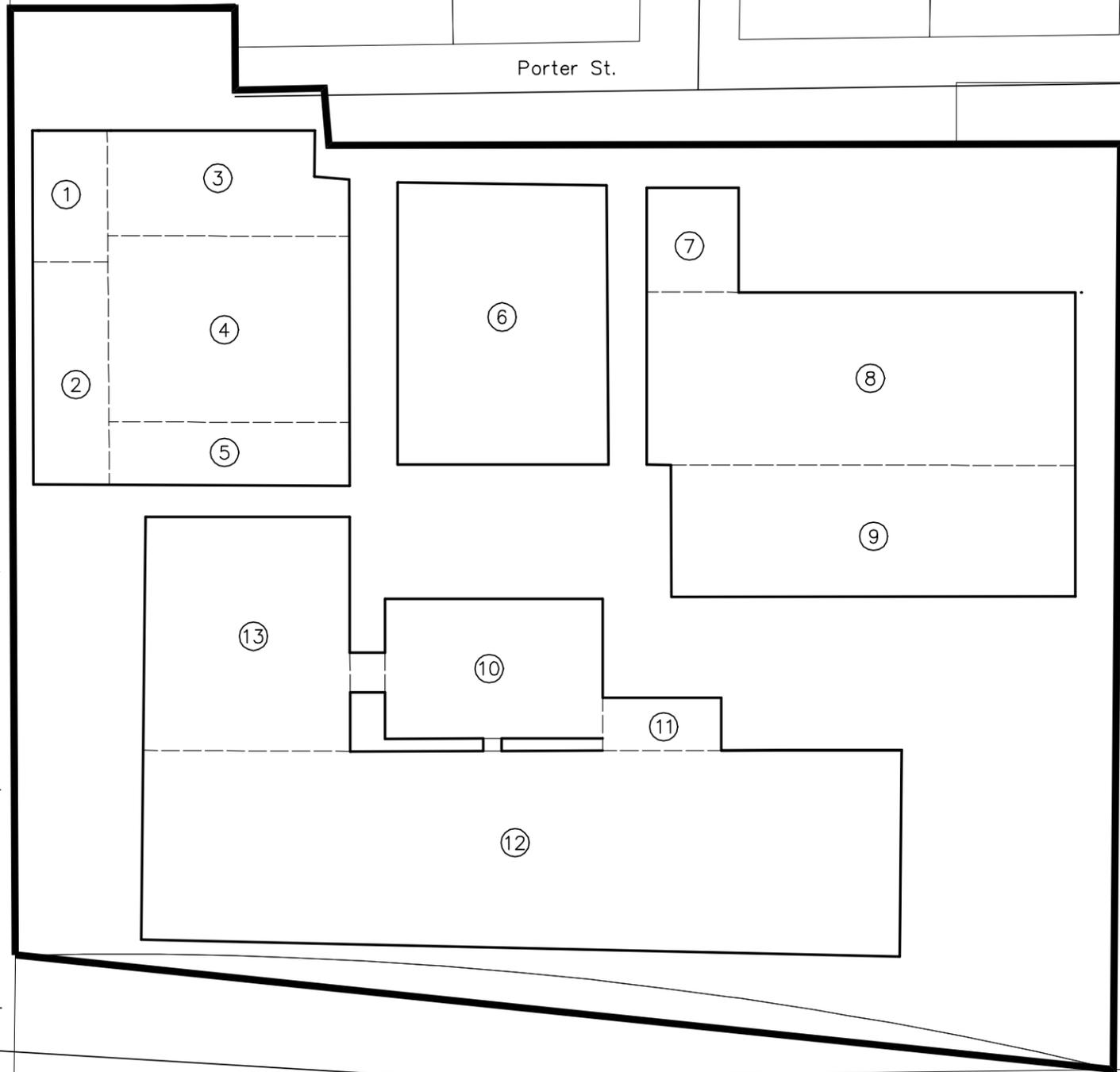
that support the steel frame and trusses, and the monitors above. The three flat-roofed monitors run the length of the building to accommodate overhead moving equipment within. The monitors stand about twenty-four feet high, rising approximately seven feet above the lower adjoining walls to create a distinctive boxy profile on the end elevations. The monitors originally had steel sash windows, but these have since been sheathed with sheet metal. Exterior walls are common brick. The end walls have stepped parapets, and are capped with stone coping. Although many windows in the lower walls have been covered with plywood, those still exposed are large, multi-light pivoting metal sash units. The placement of doors and windows conforms directly with the operations originally performed with the building, and provides maximum access and natural illumination to the work areas within.

### **Reinforced Concrete**

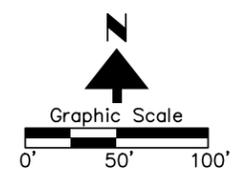
Although there were a few earlier experiments in the medium, reinforced concrete was widely embraced for industrial applications at the beginning of the twentieth century. Industrial lofts and production sheds (see below) were among the first buildings erected to use reinforced concrete construction methods. Most early concrete buildings were monolithic (poured on site), and were based on traditional beam-and-girder framing methods. With the addition of steel bars or rods, however, concrete was made stronger than other materials of construction, and more flexible as a framing system.

Reinforced concrete is a fireproof material with great tensile strength (for long roof spans) and compressive strength (to support heavy suspended machinery). It is also able to absorb and deaden vibration, a characteristic that became especially useful in the early twentieth century as manufacturing equipment became larger and heavier and operated at higher speeds, placing a greater demand on the building's structural frame. The strength of reinforced concrete shifted the pressure on outside bearing walls to internal columns, which allowed for larger windows, deeper penetration of light, and bigger buildings. With the development of new systems, reinforced concrete assumed a skeletal function that is a hallmark of factory buildings from around 1910 to 1930. The characteristic gridlike appearance of concrete buildings was achieved by extending the floor slab beyond the face of the structure to support panel walls and large windows.<sup>100</sup> Developments in flat slab construction a few years later offered comparable practical advantages.

<sup>100</sup> Bradley, *The Works*, p. 157.



HISTORIC RESOURCES	
1.	Office (1909, 1955)
2.	Assembling Department & Ware Room (1909)
3.	Engine Testing (1917)
4.	Machine Shop (1918)
5.	Tool & Die Shop (1909)
6.	Machine Shop & Engine Assembly (1917, 1940)
7.	Clock Room (1920, 1942)
8.	Assembly Room (1920)
9.	Assembly Room (1919)
10.	Casting & Cleaning (Rattlers, 1921)
11.	Shipping & Loading Dock (1952)
12.	Foundry (1916, 1920)
13.	Core Building (1919, 1950, 1964)



**Mannik & Smith Group, Inc.**  
 Consulting Engineers, Surveyors &  
 Environmental Consulting  
 Toledo, Dearborn, Detroit

FIGURE 2  
 THEMATIC SURVEY OF EARLY  
 AUTOMOTIVE HISTORY (1890-1930)

NOVO ENGINE CO.  
 700 PORTER ST. & 705 E. OAKLAND AVE.  
 LANSING, MICHIGAN

DATE 6/03	DRAWN BY AJS	CADD FILE LANA1A.FIG2	PROJECT NO. LANA1A
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C & O Railroad

Porter St.

E. Oakland Ave.

The potential applications for reinforced concrete in factory construction received considerable attention in Michigan in the early 1900s, especially as it applied to the auto industry. The first building in Detroit to use the material was designed in 1905 by Albert Kahn for the Packard Motor Car Company. Reinforced concrete was ideally suited for the needs of early auto makers “who wanted three or four-story factory buildings which had large unobstructed floor space and were strong, fireproof, and inexpensive.”<sup>101</sup> Kahn became one of the country's leading and most prolific innovators in that field. Although the strength and flexibility of steel framing – and the speed with which it could be erected – led builders to favor steel over concrete in the teens and twenties, the introduction of wide-span concrete forms in the 1930s renewed their interest in the practical usage of the material.

The Prudden Wheel building (725 E. Saginaw) is one of the premiere examples of reinforced concrete construction in Lansing. Built in 1916, this three-story industrial loft building was constructed using brick curtain walls and a reinforced concrete structural system referred to as the Kahn system. Patented by Julius Kahn, this was one of the most successful concrete construction systems marketed in the early twentieth century, and was widely adopted in the design of auto factories and industrial buildings requiring an open floor plan and ample natural lighting. In this case, large steel sash windows and brick walls were installed within the concrete framework to create the signature grid pattern associated with this type of construction. Although window transoms remain – with multi-paned prism glass to diffuse and soften the outside light – the lower window sash have been replaced with fixed sash units. The building has an L-shaped plan that faces south onto E. Saginaw. The main entrance is located on this south facade. The doorway here has a concrete paneled surround and projecting paneled hood. Offices were originally located in the east end of the front wing, with auto parking indicated at basement level and machine shops occupying the remainder of the building. Once part of a fifteen-acre industrial complex, and the main office for the Motor Wheel Corporation (which merged with Prudden Wheel in 1920), it is the last structure associated with those companies remaining on the site. The Prudden name is spelled out with colored brick on the large chimney on the west elevation, a lasting reminder of the company's earlier presence in Lansing.



*Plate 31: Reinforced concrete construction using the Kahn system  
(Prudden Wheel)*

The doorway here has a concrete paneled surround and projecting paneled hood. Offices were originally located in the east end of the front wing, with auto parking indicated at basement level and machine shops occupying the remainder of the building. Once part of a fifteen-acre industrial complex, and the main office for the Motor Wheel Corporation (which merged with Prudden Wheel in 1920), it is the last structure associated with those companies remaining on the site. The Prudden name is spelled out with colored brick on the large chimney on the west elevation, a lasting reminder of the company's earlier presence in Lansing.

### **Industrial Loft**

The industrial loft is a building type that was introduced in the mid-nineteenth century. The loft was a multi-story manufacturing building that housed several commercial or industrial tenants, and was most commonly located in urban areas, where real estate values were comparatively high. In the nineteenth century, the loft building was usually wood-framed, with stone or brick exterior walls. Iron and steel framing was also used for a time. However reinforced concrete construction was especially

<sup>101</sup> Hyde, "The Lower Peninsula of Michigan," p. 269.

well-suited for the light manufacturing and finishing operations typically located in this type of building, and was broadly adopted in the early twentieth century (see Prudden Wheel example above). To minimize intrusions in the work space, service areas and circulation routes were vertically integrated, with conveyers, chutes, hoists and elevators simplifying operations within the building. The loft could accommodate related functions or could house the entire works, or could be adapted for office use or storehouse functions.

An example of an early brick industrial loft is located within the Novo Engine Company complex, one of the earliest and most important gasoline engine manufacturers in Lansing (700 Porter and 705 E. Oakland). Originally located at 1131 Race Street in North Lansing (see above), the company moved to the Porter Street site in 1906. The business eventually grew to encompass eight acres, with multiple buildings covering 236,000 square feet of floor space, many of them still remaining. The seven historic buildings identified through field reconnaissance at this site represent a full range of functional and industrial types, including offices and assembly room (1909), foundry (1916), engine testing room (1917), machine shop and engine assembly (1917), and glass-monitored factory (1919-20). See Figure 2 for the location of these buildings on the site.



*Plate 32: Novo's first office building, an industrial loft, constructed 1909*

At its core is the company's original office and assembling room, attached structures that were both constructed in 1909 using standard mill construction. The office building faces north onto Porter Street, and the assembly room adjoins to the south; both are parallel with the C&O rail spur to the immediate west. The front office building is a two-story industrial loft, with brick bearing walls and a five-bay facade. Features include segmental-arched windows with stone sills, a primary center entry with secondary off-center doorway, parapet wall, and flat roof. Aside from the modest brick detailing over windows, the building is otherwise devoid of surface ornament, which

is characteristic of the type. Nevertheless it has significant historic associations, and represents one of several nineteenth- and twentieth-century industrial building types represented within this manufacturing complex.

### **Production Shed**

The production shed is simultaneously the most elementary and versatile of buildings in the factory complex. It was engineered for manufacturing purposes through the design of framing, walls and roof. It was one story tall and housed continuous process operations such as those used in machine shops, forges, erecting shops, and foundries. Interior framing could be wood, iron or steel, and exterior walls were most commonly brick. Pilaster wall construction and small windows were used to achieve greater wall strength. A signature feature of the production shed was a wide, rectangular plan that could be adapted to any length needed. By the turn of the twentieth century, iron and steel framing was introduced, providing more unobstructed space and an area for electric powered cranes. Overhead traveling cranes were essential to the operations within a production shed. At first, the shed had a central crane-served bay, flanked by lower lean-tos. After 1880 it became a series of bays of various dimensions; the assembly shops at the Novo plant (previously described on page 60) represent this type of structure, as does the Lansing Motor & Pump building at 506 S. Hosmer.

Lansing rose to prominence in the early twentieth century as the capital of the drop forge industry, with a strong national reputation for producing quality forgings. The process of forging is defined as the working of metal – either hot or cold – to some desired shape by hammering or pressing it. The drop-forging process is best-suited for parts that demand great strength and light weight, such as automobile components. The minimum equipment needed to perform a drop-forge operation is a hammer and a set of forging dies, but a forging factory is more typically comprised of several buildings or structures that are dedicated to a specific related activity. Examples of such activities include forging, machining, pattern-making, heat-treating, pickling, cleaning, or storing, activities most aptly performed in a production shed.

A forge room was typically a production shed with roof monitor. Initially, small chimneys on the roof near the eaves indicated the location of the forges within. Later, these small forge stacks were replaced by a single chimney serving several forges. The forge was typically located close to the erecting shed or foundry. One example of a forge shop production shed identified in our survey is the Atlas Drop Forge. The Atlas company is Lansing's oldest forging operation, and the last one still in use. It was founded by R.E. Olds in 1906 to support production of his Reo automobile factory. The factory was purchased in 1945

by Dana Corporation, and as Dana's only forge plant it supplies automotive parts to the parent company. The factory complex is comprised of at least a dozen major structures, including a forge shop (1914), boiler room (1917), steam hammer (1920), machine/die room (1917), tool room (1917), and front office (1917, 1942).



*Plate 33: Atlas Drop Forge at 209 W. Mt. Hope*

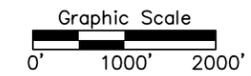
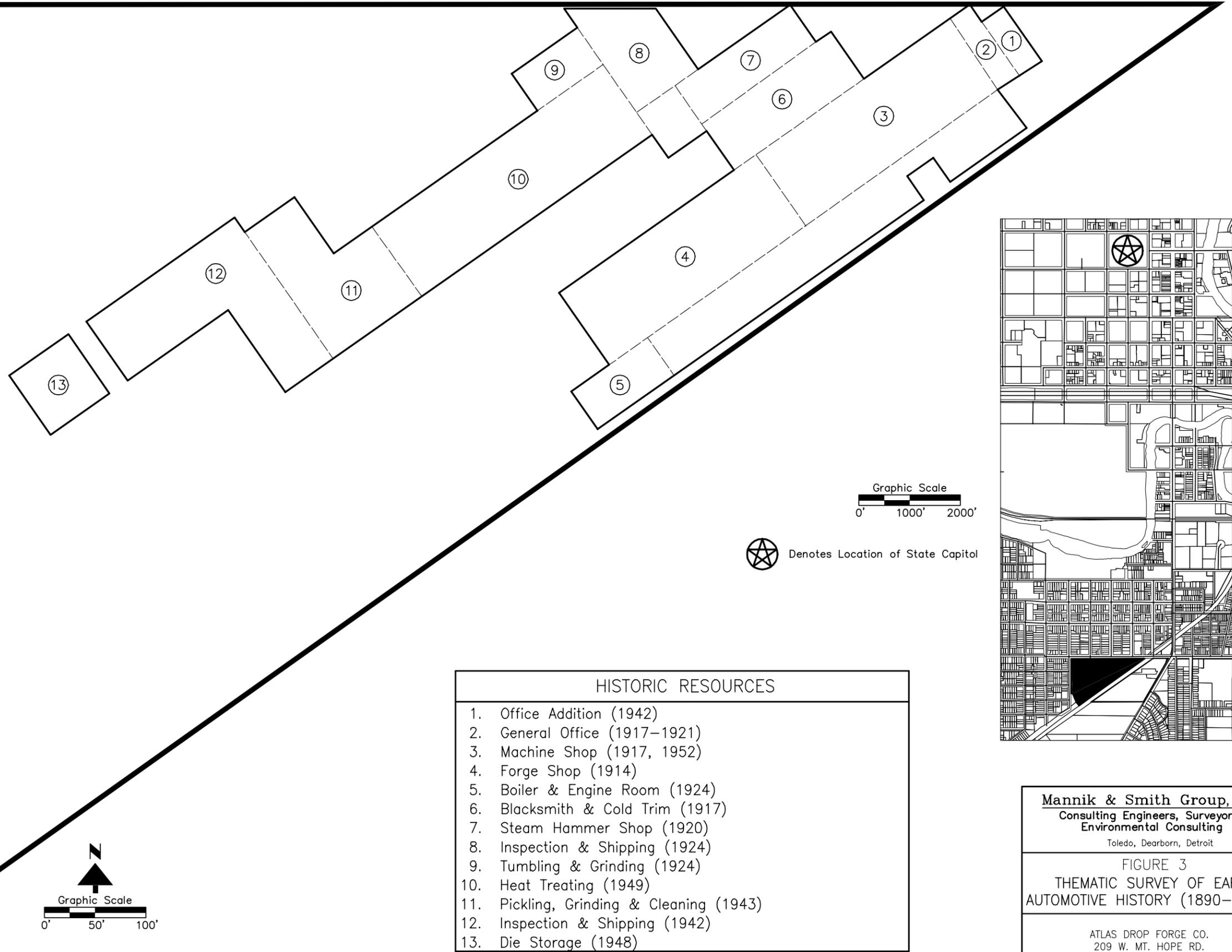
The oldest remaining building on site, the forge shop (pictured in photo, behind office) is a steel frame structure with steel trusses. It

is identified in Figure 3 as building 4. The gable ends are brick veneer, and there are seven, six-foot steel sash skylights and six revolving ventilators on the roof slope, which is supported by steel trusses beneath a low-pitched gable configuration. Floors are wood block. Only parts of the structure are still evident from outside the building, as the complex has since grown by accretion, and the forge shop is now surrounded by newer additions or outbuildings.

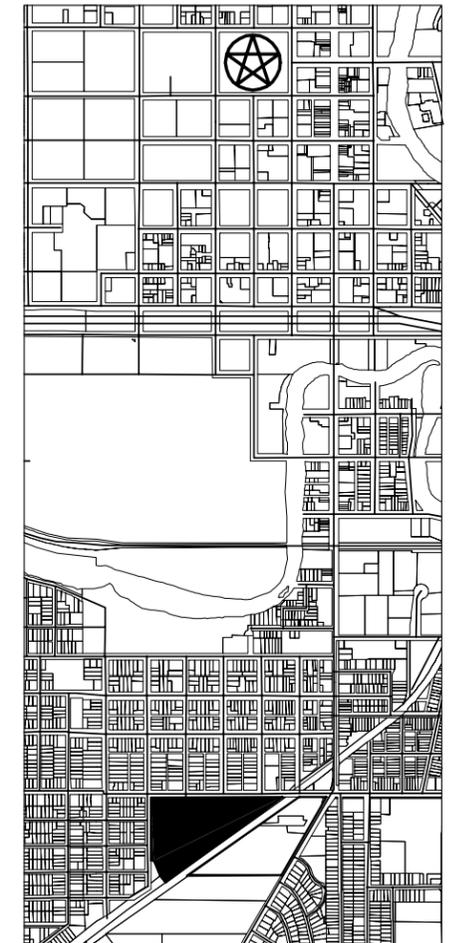
The Melling Forging Company is also composed of numerous buildings that serve specialized functions. Established in 1917 by Alfred W. Bowes, it is comprised of approximately eleven major structures, including a brick office building (1948), production rooms with butterfly monitors (1940), drop hammer room with circulating ventilators (1920), foundry with gravity ventilator (1953), and service and storage buildings of various ages (see Figure 4). Again, the drop hammer room at Melling (its oldest remaining building) is also located deep within the complex, surrounded by newer structures. This not only speaks to the versatility of the production shed as an industrial building type, but how essential the operations within that structure are to the manufacturing process, as well as how little those operations may have changed over the past century.

W. Mt Hope Rd.

Osband Ave.

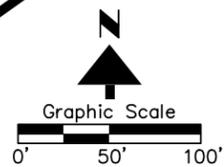


 Denotes Location of State Capitol



HISTORIC RESOURCES

1. Office Addition (1942)
2. General Office (1917-1921)
3. Machine Shop (1917, 1952)
4. Forge Shop (1914)
5. Boiler & Engine Room (1924)
6. Blacksmith & Cold Trim (1917)
7. Steam Hammer Shop (1920)
8. Inspection & Shipping (1924)
9. Tumbling & Grinding (1924)
10. Heat Treating (1949)
11. Pickling, Grinding & Cleaning (1943)
12. Inspection & Shipping (1942)
13. Die Storage (1948)

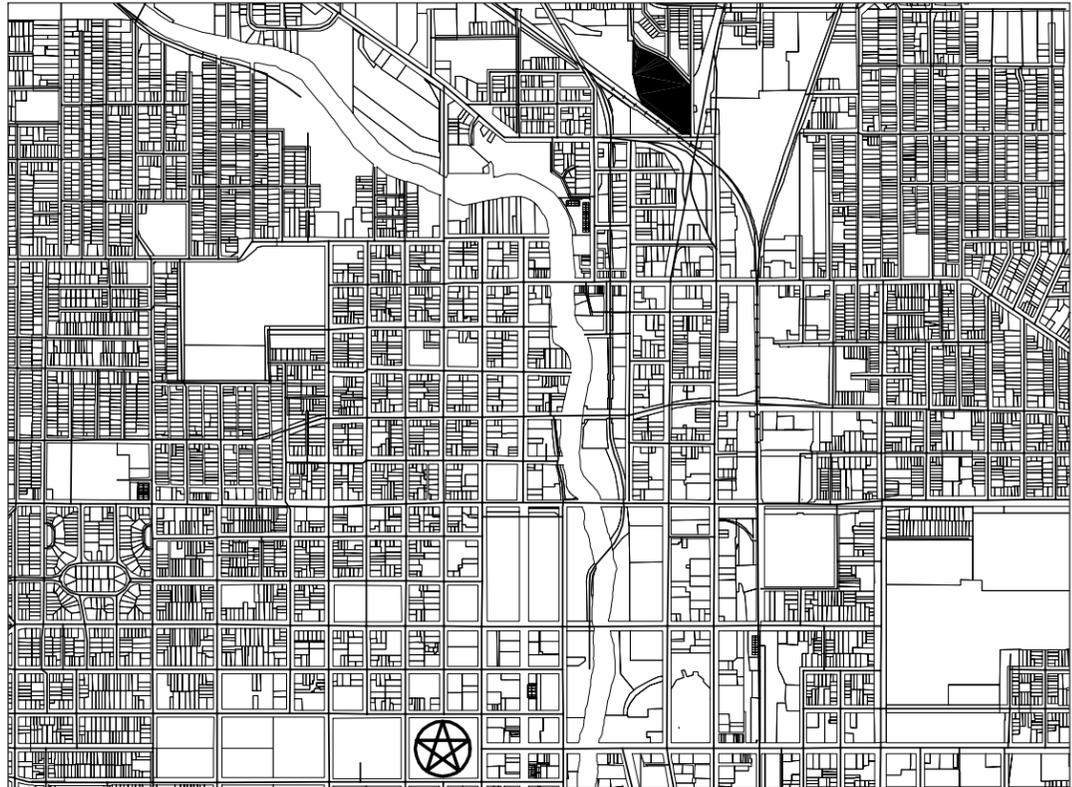
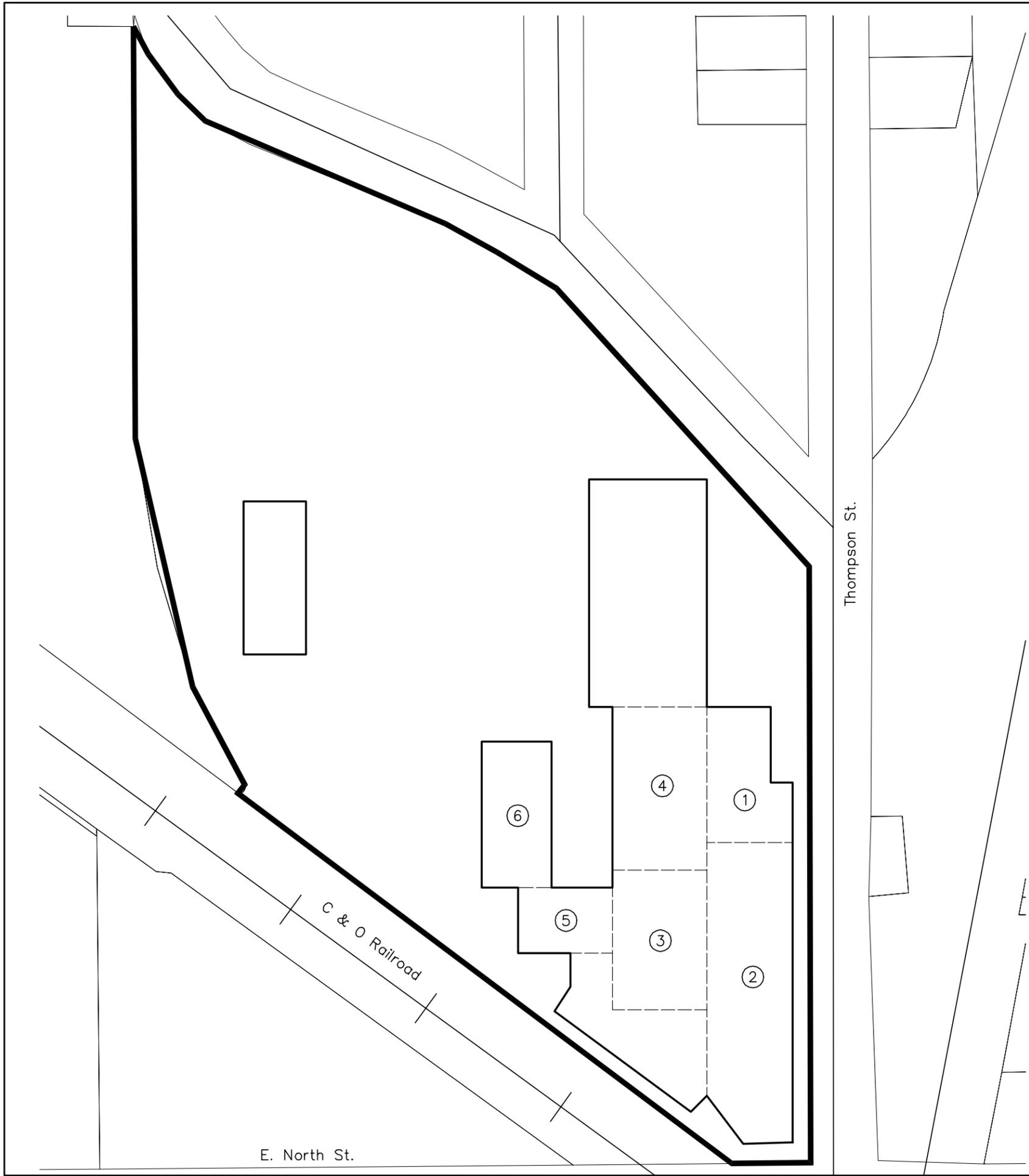


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FIGURE 3  
 THEMATIC SURVEY OF EARLY  
 AUTOMOTIVE HISTORY (1890-1930)

ATLAS DROP FORGE CO.  
 209 W. MT. HOPE RD.  
 LANSING, MICHIGAN

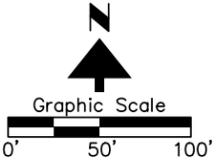
DATE 6/03	DRAWN BY AJS	CADD FILE LANA1A.FIG3	PROJECT NO. LANA1A
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Denotes Location of State Capitol



HISTORIC RESOURCES	
1.	Office (1948, 1955)
2.	Factory Building (1950)
3.	Machine Shop & Office (1920)
4.	Factory Building (1948, 1956)
5.	Drop Hammer Room (1929)
6.	Forge Shop (1953)



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FIGURE 4  
 THEMATIC SURVEY OF EARLY  
 AUTOMOTIVE HISTORY (1890-1930)

MELLING FORGING CO.  
 1709 THOMPSON ST.  
 LANSING, MICHIGAN

DATE 6/03	DRAWN BY AJS	CADD FILE LANA1A.F1G4	PROJECT NO. LANA1A
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## Power Plant

Prior to the 1930s, a manufacturer commonly incorporated a freestanding power plant into the factory complex to generate the power necessary for its operations. Even when power was available through nearby municipalities or power companies, an on-site plant offered him a certain measure of independence. This practice became less common as the old steam-powered turbines wore out, and owners were faced with the considerable cost of replacing the power source.<sup>102</sup>

The potentially dangerous nature of the generating process imposed very specific requirements in the design of the power plant. Steam engines, for instance, were prone to explode, causing injury to nearby workers and damaging other buildings in the vicinity. The plant thus typically stood apart from other buildings. The discrete functions associated with power production also were somewhat incompatible, so the boiler house and engine room were placed in separate structures. Even after the introduction of electricity, equipment for boilers and fuel delivery was located in the primary (taller) building, and engines or generators were contained in an adjoining secondary building. To avoid explosions, careful inspection and regular maintenance of equipment was performed. It required sufficient natural lighting for workers to perform those tasks and, to that end, large windows, skylights and monitors were incorporated into the building design. A power plant was usually constructed of fireproof materials such as stone or brick, and later of reinforced concrete. To facilitate the combustion of coal, an iron stack or a brick or reinforced concrete chimney was added to create a draft and carry off gases that were created. The single example of a powerhouse operation identified in this study is located within the Motor Wheel Corporation factory complex at 1508 N. Larch – originally the Gier Pressed Steel plant.

Michigan's tooling industry is the largest in the country, due in large part to the state's high concentration of automobile plants. The success of R.E. Olds' one-cylinder runabout helped early suppliers establish themselves in Lansing, and drew the attention of investors and prospective customers to the industry. As sales volume and model options grew in the auto industry, the demand for tooling products increased accordingly.<sup>103</sup> Although some machine work was produced in-house, the earliest auto manufacturers relied largely on independent shops for their tooling needs. In Lansing, one of the most prominent of these operations was the Gier Pressed Steel Company.

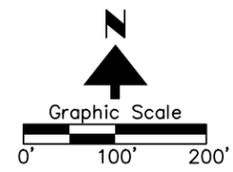
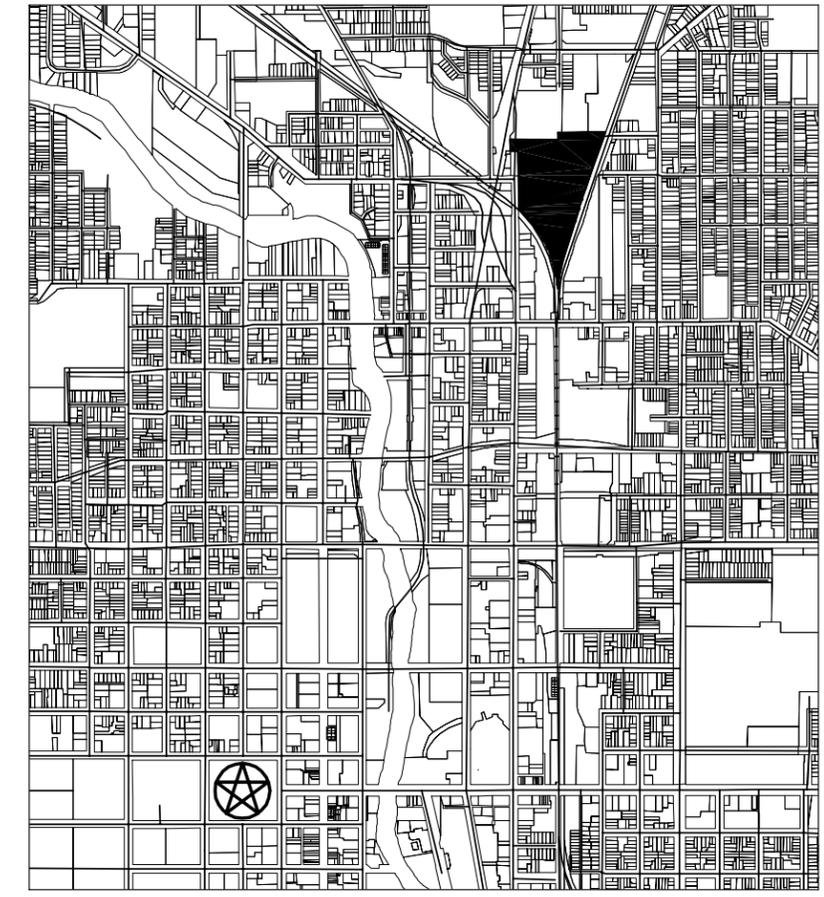
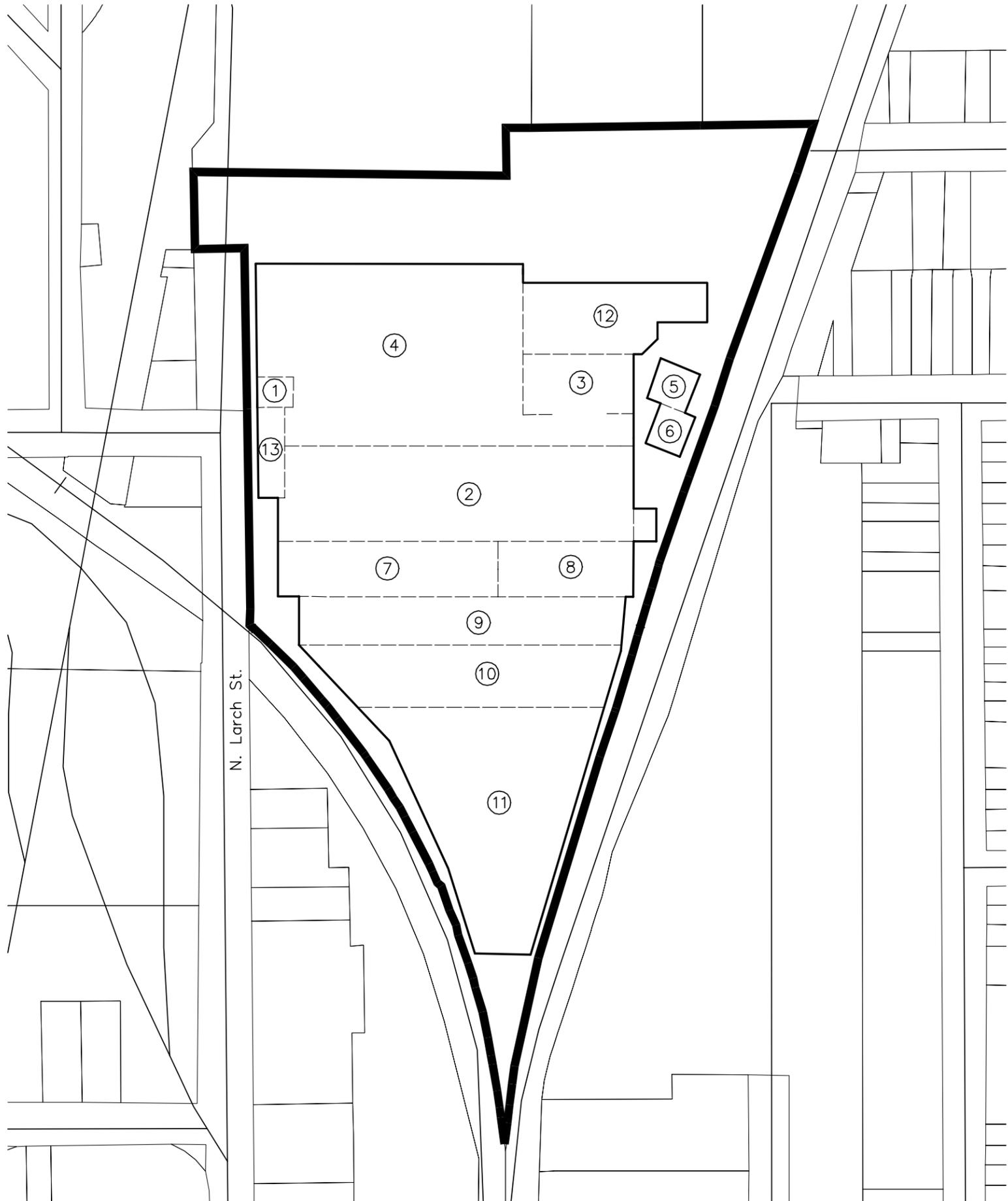
The Gier Pressed Steel Company was incorporated in 1915 by Burton S. Gier. The company specialized in a general line of stamping and pressed steel work and produced parts for the Prudden Wheel and Auto Wheel companies. In 1916, the Gier plant was constructed at a cost of roughly \$200,000. Newspaper accounts declared the double monitor steel and glass factory, together with its office building and power plant, "to be one of the finest in the world."<sup>104</sup> In 1920, the company merged with others to form the Motor Wheel Corporation, becoming the world's largest producer of wood and steel wheels. Production was centered at the Gier plant, which was consumed by the subsequent growth of the larger corporation (see Figure 5). Although the original factory and offices have since been enclosed, the power plant and adjoining engine room on the east side of the site remain largely untouched.

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<sup>102</sup> Bradley, *The Works*, p. 49.

<sup>103</sup> Donald N. Smith, *Technological Change in Michigan's Tool and Die Industry*, (Ann Arbor: The University of Michigan, 1968), p. 17.

<sup>104</sup> Newspaper clipping from the CADL/FPML.



HISTORIC RESOURCES	
1.	Office (1916)
2.	Press Building (1916)
3.	Die Storage (1929)
4.	Hub Shop (1928)
5.	Engine & Compressor Room (1925, 1934)
6.	Boiler Room (1923, 1925, 1928-1929)
7.	Manufacturing, Storage & Shipping (1923)
8.	Pickling Room (1918)
9.	Steel Storage (1928, 1956)
10.	Truck Rim Storage (1936)
11.	Manufacturing, Storage & Shipping (1945)
12.	Hub Shop (1937-1943)
13.	Engineering & Cloak Room (1941)

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FIGURE 5  
 THEMATIC SURVEY OF EARLY  
 AUTOMOTIVE HISTORY (1890-1930)

MOTOR WHEEL CORP.  
 1508 N. LARCH ST.  
 LANSING, MICHIGAN

DATE 6/03	DRAWN BY AJS	CADD FILE LANA1A.FIG5	PROJECT NO. LANA1A
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The Gier powerhouse is located in a freestanding two-part facility on the far east side of the factory complex. The boiler room (pictured below) is a stepped shed, with triple steel sash monitor windows and pilaster type brick walls. The boiler room was built in several phases, beginning with the core structure in 1923, which has exposed steel roof trusses, reinforced concrete floors and roof, and salt-glazed brick interior wall finish. Attached is a brick pump room (1923), coal house (1925), switch room (1928), and meter house (1941). There are no windows on the exterior walls below the roof. Connected to the boiler room on the north is the engine room, which was built in 1923. The main mass has a reinforced concrete floor and roof, steel truss roof, steel sash windows, with tile and fire-glazed brick walls. Next to the boiler room, the coal stack bearing the Gier name is still clearly visible.



*Plate 34: Powerhouse at Gier Pressed Steel, more commonly known as the Motor Wheel complex*

## RECOMMENDATIONS

The theme of this study is the automobile industry in Lansing during the period from 1890 to 1930, with a focus on the manufacturers, suppliers, and individuals that contributed to the industry in a secondary capacity. The objective of the study was to establish a context on the automotive theme; identify related sub-themes and property types; locate and document the sites associated with the theme; and evaluate the integrity and significance of the sites. That evaluation was based on the property's conformance with the Secretary of the Interior's Criteria for Evaluation, which are administered under the National Park Service and which establish the minimum threshold for national register eligibility (see pages 5-6). The discussion that follows offers a brief analysis of findings and recommendations for historic designation.<sup>105</sup>

Within the general scope of the project, four major themes and six sub-themes were revealed through background research and subsequent context development. They are:

- Architecture;
- Commerce, including both retail and wholesale sales;
- Industry, in the areas of auto industry and trade, foundry industries, and World War II defense industries, and;
- Transportation, as related to the road.

Most of these themes are represented by highly specialized property types that defy standard architectural classification, while others – particularly the homes associated with automobile industry leaders – conform to the prevailing styles of the time. Domestic property types were in every case single-family residences. In the category of commercial buildings, thematically-associated properties were auto showrooms, auto repair garages, and service stations. Industrial types were expressed as automobile (or truck) factories, general factories, foundries, industrial complexes, machine shops, and stamp mills. The reader is directed to pages 39-69 for a discussion of the architectural styles and functional types identified through field reconnaissance, with examples that illustrate those terms.

Within the scope of this project, fifty-two buildings or sites were identified and recorded – at either the reconnaissance or intensive level – and each was assessed for eligibility potential. Of those properties considered, three properties were *previously listed* in the National Register, ten are recommended as *not eligible* for listing, and twelve are recommended for additional study (*more data needed*). Twenty-seven properties appear to meet the criteria for listing and, in our opinion, are *eligible* for listing. For purposes of discussion, the properties described below are organized alphabetically by street address. A summary overview of sites and findings is also offered in Table 1.

### **Properties in the survey area currently listed in the National Register of Historic Places**

Three properties identified in this study are contributing elements in the North Lansing Historic Commercial District, which was listed in the National Register in 1976:

- Lansing Commercial Body Company at 116 E. Grand River;
- Cady, Glassbrook & Company (later Cady & Hildreth) at 1131 Race;
- Turner Street hack barn at 1224 N. Turner.

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<sup>105</sup> Although preliminary findings were presented in draft form to the SHPO and LPO staff, and their comments were incorporated into the finished text, the final recommendations contained within this report represent the professional opinion of the consultant team only.

In spite of their status within a designated historic district, all three buildings are included in this survey because of the unique and potentially significant associations they have with automotive history that are not directly referenced in the National Register nomination. The building at 116 E. Grand, for instance, is located directly across the street from the former Auto Body site, and for a very brief time enjoyed some nominal ties to that industry as a truck body manufacturing shop in the mid-twenties. In 1891, one of Lansing's first successful gasoline engines was produced at the machine shop and foundry at 1131 Race, but the building has been significantly remodeled and its integrity severely compromised. For these buildings, given either weak historic associations or loss of physical integrity, there is scant likelihood for designation under the automotive theme. However, the hack barn at 1224 N. Turner is highly significant within the automotive theme. It is the single example identified in this study of a commercial enterprise bridging the wagon and auto eras, and should be prominently featured in any future interpretive efforts on the automotive theme.

### **Properties in the survey area previously determined eligible for listing in the National Register by the State Historic Preservation Office**

Twenty properties identified within the project area have previously been determined eligible for National Register listing by the SHPO. Of those, only one property has been determined individually eligible:

- Charles Blades house at 230 S. Butler.

The remaining nineteen properties fall within the boundaries of districts that the SHPO has formally determined to be eligible for listing. Two properties are located in the Moores River Drive/Cambridge Road area:

- Ray Potter house at 1348 Cambridge; and
- Harry Harper house at 1408 Cambridge.

Four properties are recommended eligible as part of the Old Fourth Ward - Ionia Street Neighborhood Area:

- Pulver Brothers Filling Station at 127 W. Grand River;
- Burton S. Gier house at 301 N. Sycamor;
- Central Garage at 1122 N. Washington; and
- S & K Garage at 1125 N. Washington.

Included in the Westmoreland Neighborhood Area are two properties that are associated with the automotive theme:

- Elmer Dail house at 1204 N. Genesee; and
- Ernest Dail house at 1306 N. Genesee.

One surveyed property in the Cherry Hill Neighborhood Area is recommended eligible for national register listing (the boundaries recommended by the SHPO being larger than those of the existing locally-designated district):

- James Seager house at 533 S. Grand

The Green Oak Neighborhood on the near east side of Lansing contains eight surveyed properties:

- Lansing Motor & Pump Company at 326 N. Hosmer;
- Whiteley Peerless Sales at 731 E. Kalamazoo;
- Kramer Company at 800 E. Kalamazoo;
- Liberty Garage at 810 E. Kalamazoo;
- Root's Garage at 812 E. Kalamazoo;
- Square Deal Auto Body Company at 826 E. Kalamazoo;
- Abel Motor Sales at 726 E. Michigan; and
- Aaron DeRoy Motor Car Company at 827 E. Michigan.

On the east side of Sparrow Hospital is the Eastside Neighborhood Area, which contains two surveyed properties:

- Hugo Lundberg house at 1701 Jerome; and
- Harris Thomas house at 1712 Jerome.

Areas recommended by the SHPO for national register listing include both residential and commercial resources, and their pattern of distribution is concentrated primarily within the historic core. The absence of factories or manufacturing facilities in the list of recommended properties suggests that industrial sites in Lansing have not yet become a recognized priority for rehabilitation or redevelopment activity. It is hoped that the information gathered through this study will have a positive impact on preservation efforts in that under-recognized area.

### **Properties not eligible for listing in the National Register**

To qualify for listing in the National Register, a property must typically be fifty years or older, must demonstrate architectural, historic or cultural significance, and must maintain sufficient physical integrity to convey a specific sense of time and place.<sup>106</sup> Of the fifty-two sites surveyed, it is our opinion that ten of them fail to meet the threshold for listing, based primarily on this latter consideration.

Building additions and alterations are clearly an important component of business growth, and they demonstrate the accretionary nature of industrial construction. For that reason, considerable latitude was given to altered buildings in the course of our evaluations. The exceptions to this occurred when the building fabric was so clearly and irreversibly compromised that historic associations were no longer discernable, or at a complex site where selective demolition left buildings to stand in isolation and out of context. If either condition applied, the site was recommended not eligible for listing. After initial identification of resources was completed, additional research revealed some properties to have very weak historic associations within the automotive theme, with an indirect or extremely short-lived connection to the industry. This also resulted in a recommendation of not eligible.

Based on the Secretary of the Interior's Criteria for Evaluation, the following surveyed properties are not recommended for National Register listing:

- Wolverine/Cities Service Oil Company at 711 Center;
- Duplex Truck Company at 732 E. Hazel;
- Dail Steel Company at 1000 S. Hosmer;
- Allen Sparks Gas Light Company at 418 E. Michigan;
- Peez Oil Corporation at 614 E. Michigan;

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<sup>106</sup> For this study, resources must relate to and exhibit features of the automotive theme in the period from 1890 to 1930 in order to qualify for national register listing.



Lansing who was able to transfer manual skills acquired in earlier related industries to production of the automobile. The Blades house is recommended eligible for listing in the National Register under Criteria A, for its association with *events that have made a significant contribution to the broad patterns of our history*.

1348 Cambridge Ray Potter House House  
Son of a prominent businessman, Ray Potter was president of the Lansing National Bank and a major investor in local real estate and business. Potter helped found the Gier & Dail Manufacturing Company in 1911, and was a stockholder in the Lansing Foundry Company. Upon closure of the foundry, he purchased the site with friend and neighbor Harry Harper and sold it in 1938 to the Duplex Truck Company. Located in the prestigious Cambridge Road neighborhood, his home is a sprawling two-and-a-half story residence, a textbook example of early high-style Tudor design. It was occupied by Potter from around 1930 to the 1950s. The building is recommended eligible under Criterion B for its long-term association *with the lives of persons significant in our past*. It is also recommended under Criterion C for representing *the distinctive characteristics of a type, period or method of construction*.

1408 Cambridge Harry Harper House House  
Harry Harper was among Lansing's most prominent twentieth-century industrialists and civic leaders. Harper came to Lansing in 1903 and worked for W.K. Prudden & Company. In 1916, he was made president of the Prudden Wheel Company (successor to the parent organization). When Prudden merged to become part of the Motor Wheel Corporation in 1920. Harper was named president and general manager of the corporation, a position he held until his retirement in 1946. He also helped to organize the Duplex Truck Company, and was associated with a variety of other business, civic and charitable enterprises. The home he occupied in the Cambridge Road neighborhood from ca. 1930 to 1949 was designed by Detroit architect Harold Beckett in the Tudor Revival style, the largest home in this early suburban enclave. The home is *associated with the lives of persons significant in our past* and is recommended eligible under Criterion B. As a handsome example of period revival architecture, it exhibits the *distinctive characteristics of a type, period, or method of construction*, and on that basis is also recommended for listing under Criterion C.

1127 N. Cedar Dean & Harris Auto Showroom  
The Dean & Harris showroom was established in Lansing in 1925 by Roy Dean and D.D. Harris. The operation was originally located in Webbersville in 1915, but moved to Lansing when Ford Motor Company authorized establishment of a franchise there. Dean & Harris became one of the top dealerships in the Ford organization, and they operated at this location through the 1960s. The building is a single-story Commercial Brick structure that is rich with contrasting stone detail, including a rusticated doorway surround. One of Lansing's most successful auto dealerships – and a long-lived Ford franchise – the building is recommended for eligibility under Criterion A. As an intact example of dealership design that *embodies the distinctive characteristics of a type, period, or method of construction* the building is recommended under Criterion C, as well.

410 S. Cedar Standard Oil Company bulk facility Commercial  
In the early days of travel, bulk plants served as a primary outlet for storing and dispensing fuel. The Standard Oil Company facility stands as an exceptional example of that type of operation in Lansing. Constructed in three phases from 1917 to 1935, the building originally contained a service garage, offices, and a warehouse for the dispatch and repair of fuel trucks. Despite a recent conversion of the garage space, the building retains a high level of physical integrity. For its long-standing associations with the gasoline service industry, and as the single warehouse facility of its type identified in the survey, the bulk plant is recommended for national register listing under Criteria A and C.

1213 Center Raymond Chevrolet Sales Auto Showroom  
Raymond Chevrolet Sales was built in three construction phases. The original four-bay showroom (plus tire and battery service) was built in 1924, and was subsequently expanded in 1926 and 1928 for office and service space. The building was occupied by Raymond Chevrolet until the mid-1930s. Later occupants included a machine works, heating and ventilating company, and heating and plumbing supplier. Despite some reversible door and window alterations, the facade still conveys a sense of the multiple functions within, a key feature of showroom design. For its thematic associations in the areas of transportation and commerce, and as an example of early franchise (Chevrolet) development, the building is recommended for listing under Criterion A for referencing *events that have made a significant contribution to the broad patterns of our history*.

1204 N. Genesee Elmer Dail House House  
The Elmer Dail house was built in 1922 in the fashionable Westmoreland neighborhood on the west side of Lansing. Elmer Dail was trained as a civil engineer. He worked briefly for the Gier & Dail Manufacturing Company before becoming manager of the Jarvis Engine & Machine Works in 1915, a company with a long-standing history in the manufacture of engines. In the 1920s, the company was renamed Jarvis Engineering Works, and became one of the pioneers of the structural steel business in central Michigan. Dail occupied the home from 1922 through the 1940s. The building is a two-story Colonial Revival home, with a symmetrical facade, distinctive half-timbering details, and picturesque eyebrow window and projecting dormers that are typical of the side-gabled Colonial type. The home is recommended eligible under Criterion B for its association *with the lives of persons significant in our past*, and Criterion C for retaining *the distinctive characteristics of a type, period, or method of construction*.

1306 N. Genesee Ernest Dail House House  
A textbook example of a high-style English Cottage, the Ernest Dail house was built in 1921. One of the oldest homes in the Westmoreland neighborhood, it is also an outstanding and rare example of Arts and Crafts design in Lansing, with numerous picturesque features and details. The home was owned and occupied for over twenty years by Ernest Dail, president of the Dail Steel Products company. The Dail company was an early job-shop stamping plant that was organized in 1913 by Ernest I. Dail (the owner's father) for the production of automotive, agriculture and home appliance parts. Dail occupied the home until ca. 1940. For its associations with a significant figure in Lansing's stamping industry, and as unique expression of Arts and Crafts inspiration, the Dail house is recommended eligible under Criteria B and C.

533 S. Grand James Seager House House  
The Seager house was built in 1877 for Alvin Whitehead, one of Lansing's early merchants. It was occupied by Seager from ca. 1902 to 1930. In the 1930s the building was converted to apartments, and in 1999 was renovated for offices. The building is a unique local example of a two-story brick Gabled Ell with highly ornate Italianate detailing. It is recommended eligible under Criterion C for representing *the distinctive characteristics of a type, period, or method of construction*. Having made his fortunes in the copper and lumber industries, Seager came to Lansing around 1902 to work as general manager at the Olds Gasoline Engine Works. In 1903 the Olds company became the Seager Engine Works. By 1910, the Seager works was the largest of seven gasoline engine manufacturers in Lansing. Seager was president of the company until his retirement in 1915. For its associations *with the lives of persons significant in our past*, the building is also recommended eligible for listing under Criterion B.

1223 E. Grand River Capitol Heights Filling Station Service Station  
The Capitol Heights Filling Station was built in 1923. Located on a corner lot along a busy thoroughfare on the north side of Lansing, it is a one-story concrete block filling station, originally with a hipped front canopy. As gas stations nationwide began to offer service as part of their overall business format, a two-bay service wing was added on the west end of this filling station in 1947. In an effort to update its

appearance the front canopy was removed at the same time. Owned and operated by John Angal from 1923 to ca. 1937, it remained in use as a filling station under different operators through the 1960s. One of four stations identified in this survey that demonstrate the transition from early filling station to later service station, the Capitol Heights station represents a major change in the architectural program of roadside gasoline station. For that reason, it merits National Register listing under Criterion C for *embodying the distinctive characteristics of a type, period, or method of construction*.

127 W. Grand River                      Pulver Brothers Filling Station                      Service Station  
With the growing popularity of automobile touring, the method of dispensing gasoline evolved in the early twentieth century from curbside pumps to filling stations, and later to multi-purpose structures that offered both fuel and repairs. One intact filling station identified in the survey that represents the earliest type of stand-alone filling station is the Pulver Brothers Filling Station (originally a Sinclair franchise). It is a small brick structure with an integral hipped canopy in front for protected drive-through gasoline service. The station represents an early concept of retail functions in the automobile service industry, before repairs were incorporated as part of a standard roadside package. As an example of this phase of business development, the Pulver Brothers Filling Station represents *the distinctive characteristics of a type, period, or method of construction* and is recommended eligible for listing under Criterion C.

326 S. Hosmer                      Lansing Motor & Pump Company                      Factory  
One of the earliest extant engine manufacturing facilities designed and built during the period of significance is the Lansing Motor & Pump Company. Established and built in 1905 by John Ebel, it is an outstanding example of a one-story brick production shed of standard mill construction. A foundry and machine shop were added to the rear of the building in 1927 and were removed around 1976, essentially returning the building to its original appearance. Although production sheds were a common feature of complex sites, this building is unique for being the single free-standing, self-contained shop identified in this survey. For its associations with early auto-related industry, the building is recommended as eligible for listing in the national register under Criterion A. Because it is a unique intact example of a production shed factory, it is also recommended for listing under Criterion C.

506 S. Hosmer                      Michigan Screw Company                      Machine Shop  
The Michigan Screw Company was one of three subsidiary businesses created by R.E. Olds in support of the Reo Motor Car Company. It was organized in 1906 for the manufacture of precision parts for the automobile and gas engine industries, and was managed by Hugo Lundberg. By 1916 this machine shop was one of the largest manufacturers of its kind in the country, but in 1929 it merged with Federal Screw Works, and in 1932 the plant was closed. The factory was constructed in 1916, and is an outstanding example of a steel-framed industrial loft building type. There is also some suggestion that the prominent local architect, Darius Moon, may have had a part in the building design. Although this claim needs further verification, the building is nevertheless recommended eligible under Criterion A for *embodying the distinctive characteristic of a type, period, or method of construction*, or possibly for *representing the work of a master*. As an enterprise established by R.E. Olds and operated under the management of Hugo Lundberg, it is also recommended under Criterion B for its *association with the lives of persons significant in our past*.

1701 Jerome                      Hugo Lundberg House                      House  
Hugo Lundberg came to Lansing in 1906 and helped organize the Michigan Screw Company, manufacturer of precision parts for the automobile and gas engine industries. He served as president and general manager of the company, but in 1927 the company was sold to Federal Screw. The company failed soon thereafter. Lundberg was briefly involved in the manufacture of sport airplanes, but in 1933 he founded the Lundberg Screw Company. A local civic and business leader, Lundberg lived in this home until his death in 1967. The home is a vernacular version of the American Foursquare type that is sometimes referred to as the Prairie Box. A two-story brick building with tile roof, hipped dormers,

square plan, low-pitched hipped roof, and a full-width porch, the home *embodies the distinctive characteristics of a type, period or method of construction* and is *associated with the lives of persons significant in our past*, and is therefore recommended eligible under Criteria B and C.

1712 Jerome Harris Thomas House House  
Attorney Harris Thomas occupied this modest Dutch Colonial Revival style home from 1924 to ca. 1935. His residency at this location represents a relatively brief period in his later career. Thomas was a founder of the Lansing Spoke Company in the 1890s, and was vice-president of the Auto Body Company in 1901, the first company in Lansing established specifically for the manufacture of auto bodies. He was also a vice-president of the New Way Motor Company, and in 1902 was president of the Lansing Businessmen's Association. A leader in the legal and business community, Thomas was a key figure in the growth of Lansing's nascent auto industry. His home is the building most closely associated with him, and so is recommended eligible for listing under Criterion B for being *associated with the lives of persons significant in our past*.

401 N. Larch Roxanna Gas Station Service Station  
Like the Capitol Heights Filling Station on E. Grand River (see above), the Roxanna Gas Station represents a transition in retail gasoline sales that occurred in the late 1930s. Originally a simple brick box with front canopy, the station sits on a diagonal corner setting on a major thoroughfare. Built in 1928, it became a Shell franchise in 1933 and in 1963 was converted to a repair shop. A two-bay service wing was added and the original hipped canopy was removed in 1945. One of four stations identified in this survey that demonstrate the transition from early filling station to later service station, the Roxanna Gas Station represents a major change in the architectural program of roadside gasoline station that occurred in the 1930s and 40s. For that reason, it merits National Register listing under Criterion C for *embodying the distinctive characteristics of a type, period, or method of construction*.

1508 N. Larch Gier Pressed Steel Stamp Mill  
The Gier plant is one of two examples of an early stamping plant operation identified in the project area (see also Dail Steel Products at 1000 S. Hosmer). Incorporated in 1915 by Burton S. Gier, the company specialized in a general line of stamping and pressed steel work, and produced parts for the Prudden Wheel and Auto Wheel companies. In 1920 the company was merged with those two enterprises to form the Motor Wheel Company, becoming the world's largest producer of wood and steel wheels. With the merger, the Gier plant became the center of production, and the original plant was consumed within the expanded facilities of the larger corporation (see Figure 5). Intact within the complex is the powerhouse facility, which still bears the Gier name on the attached coal stack. On the basis of its historical association with an important subsidiary to the auto industry – under both the Gier and Motor Wheel labels – the property is recommended eligible as a contributing element in a district under Criterion A.

726 E. Michigan Abel Motor Sales Auto Showroom  
This auto dealership was built in 1926, and until 1964 was dedicated exclusively to the sale of Studebakers (the same year that company's marque was discontinued). The building retains all the signature features that are common to early twentieth-century auto showrooms. Located on a major thoroughfare, it is a one-story brick building with rectangular footprint. It sits close to the street curb, and is divided into functional parts that are clearly expressed on the building exterior, with large display windows in the showroom area and a garage bay for entry to the service area. Despite some alterations (principally the partial enclosure of display windows), it retains considerable original fabric, and is recommended eligible for listing for *embodying the distinctive characteristics of a type, period, or method of construction* under Criterion C.

209 W. Mt. Hope Atlas Drop Forge Stet  
Lansing's oldest forging operation is Atlas Drop Forge, which was founded by R.E. Olds in 1906 to support production of his Reo automobile factory. The forge complex was purchased in 1945 by Dana Corporation, and continues to supply automotive parts to the parent company. As such, it is the only forging operation in Lansing still in continuous use. The site is comprised of approximately ten major structures that were constructed between 1914 and 1949 (see Figure 3). The complex retains the essential key features associated with the drop-forging process. For its association with an industry that bestowed national recognition on the City of Lansing, Atlas is recommended for national register listing as a district under Criterion A. For early associations with R.E. Olds, and because it retains the distinguishing characteristics of a specific industrial type, it is also recommended eligible under Criteria B and C.

705 E. Oakland/700 Porter Novo Engine Company Industrial Complex  
Previously known as the Hildreth Manufacturing Company – maker of one of the country's first successful gasoline engines in 1891 – the Novo Engine Company moved to this site around 1909, where it continued the manufacture engines, hoists, and pumps. From an office and assembly room the company constantly expanded, and ultimately grew to cover eight acres here on the eastern fringe of Lansing's commercial core. The complex is now comprised of twelve major structures that represent a full range of functional and industrial types (see Figure 2). Included on the site is an office, assembly rooms, engine testing room, machine shop, tool and die shop, and forge. One of the earliest and most important gasoline engine manufacturers in Lansing, the Novo site is recommended eligible for listing based on its *association with events that have made a significant contribution to the broad patterns of our history*. The unique assemblage of industrial structures also represents the full range of property types that a self-contained manufacturing facility of the era would need for production. As a district, the site is recommended eligible under Criterion C for *embodying the distinctive characteristics of a type, period, or method of construction*. The Novo site tells a fascinating story about the advancement of industrial process, technology and processes in Lansing. Parts of the complex are still actively used by the Demmer Corporation, manufacturers of metal products.

905 River Jarvis Engine & Machine Works Machine Shop  
One of Lansing's oldest machine shops – derived from the Lansing Iron & Engine Works, a prominent nineteenth-century steam engine manufacturer – the Jarvis company was reorganized in 1893 by Samuel and Clement Jarvis. The company specialized in the production of steam engine and boiler works, in addition to general machine shop operations, repair, and experimental work. With the shift from steam to electrical power, the company turned to structural steel fabrication in 1922 and became a leader in that industry. The main building at this site was originally used for housing, offices and storage; attached wings on the rear became a machine shop, boiler room, and generating room. The front industrial loft and rear production sheds represent a unique combination of two distinctive property types. The building exhibits impeccable craftsmanship and creative use of materials, and remains in outstanding condition. For *embodying the distinctive characteristics of a type, period, or method of construction ... or possessing high artistic values* the Jarvis building is recommended for listing under Criterion C. Through its history in the area of engine manufacture, it is also *associated with events that have made a significant contribution to the broad patterns of our history* and is recommended eligible under Criterion A.

725 E. Saginaw Prudden Wheel Automobile Factory  
The Prudden Wheel Company building is one of three automobile factories identified in the survey area<sup>107</sup>. It was founded in 1903 as W.K. Prudden & Company for the manufacture of racing sulky and automobile wheels. Reorganized in 1916 as Prudden Wheel, the current industrial loft building was constructed for offices and machine shops. Using a reinforced concrete construction method referred to as the Kahn system, it had glass and brick curtain walls over the concrete frame, an early example of this

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<sup>107</sup> Other factories of this type are the Duplex Truck Company sites at 2100 S. Washington and 732 E. Hazel.



shaped structure was modified and expanded with subsequent occupants, including Nash Kelvinator and Duo Therm. Still, it retains many features of original construction, and is recommended for listing under Criterion A for its associations with that prominent local manufacturer.

## BIBLIOGRAPHY

- Anderson, Denice. "Lansing: Looking at Lansing's Legacy." Lansing State Journal, May 9, 1979.
- Anderson, Scott. Check the Oil: A Pictorial History of the American Filling Station. Radnor, Pennsylvania: Wallace-Homestead Book Company, 1986.
- Biggs, Lindy. The Rational Factory: Architecture, Technology, and Work in America's Age of Mass Production. Baltimore: The Johns Hopkins University Press, 1996.
- Bock, G. "The American Foursquare (1890-1935)." Old-House Journal, Vol. XXIX (No. 5), pp. 68-69.
- \_\_\_\_\_. "Dutch Colonial Revival (1900-1945)." Old-House Journal, Vol. XXIX (No. 2), pp. 69-72.
- Bradley, Betsy Hunter. The Works: The Industrial Architecture of the United States. New York: Oxford University Press, 1999.
- Branstner, Mark C. and Gram, John M. A Phase III Architectural Resource Survey: Three Downtown Neighborhoods, Lansing, MI. Submitted to the City of Lansing. Report on file MHPO. Williamston, Michigan: Great Lakes Research, Inc. (1999).
- Brown, C. Exera. Brown's Directory of Lansing, Michigan. Lansing: W. S. George & Co., 1873.
- Byrer, Thomas G. (editor). Forging Handbook. Cleveland, Ohio: Forging Industry Association, 1985.
- Carlson, Don O. "Lansing the Hub of Michigan." Inside Michigan (January, 1953).
- Carley, Rachel. The Visual Dictionary of American Domestic Architecture. New York: Henry Holt and Company, 1994.
- Carver, Carlisle. "Founded by Pioneer Industrialists." Lansing State Journal, March 21, 1948.
- \_\_\_\_\_. "Producing Forgings for the Automobile Industry." Lansing State Journal, May 2, 1948.
- Castro, Manuel. "Lansing Men Who Dared." Metropolitan Quarterly. Lansing. (n.d).
- Chilson Publishing. Lansing City Directory. Lansing: Chilson, 1908.
- \_\_\_\_\_. Lansing City Directory. Lansing: Chilson, 1913.
- \_\_\_\_\_. Lansing City Directory. Lansing: Chilson, 1918.
- \_\_\_\_\_. Lansing City Directory. Lansing: Chilson, 1921.
- Chilson & McKinley Publishing. Lansing City Directory. Lansing: Chilson and McKinley, 1898.
- \_\_\_\_\_. Lansing City Directory. Lansing. Chilson and McKinley, 1904.
- Clark, Rosalind. Architecture, Oregon Style. Portland, Oregon: Professional Book Center, Inc, 1983.

Colvin, Fred H., and Stanley, Frank A. Turning and Boring Practice. New York: McGraw-Hill Book Company, Inc, 1948.

Cowles, Albert E. Past and Present of the City of Lansing and Ingham County, Michigan. Lansing: Michigan Historical Publishing Association, 1904.

"Dail Steel Makes Varied Products." Lansing State Journal, September 12, 1948.

Darling, Birt. "Lansing Always Has Been Transportation Hub," Lansing State Journal, May 24, 1959.

"Drop Forge Association to Locate Offices Here." Lansing State Journal, June 21, 1955.

"Drop Forge To Expand." Lansing State Journal, July 10, 1956.

"Drop Forge Unit Office Moved Here." Lansing State Journal, January 1, 1956.

Dunbar, Willis F. and May, George S. Michigan: A History of the Wolverine State. Grand Rapids, Michigan: William B. Eerdmans Publishing, 1995.

Eckert, Kathryn Bishop. Buildings of Michigan. New York: Oxford University Press, 1993.

Edmonds, J. P. Early Lansing History. Lansing: Franklin De Kleine Co., 1944.

Elliot, Frank. "Transportation in Lansing." Paper presented to the Historical Society of Greater Lansing, Lansing, Michigan, on file Lansing Public Library, April 2, 1959.

Erskine, A. R. "The Financing of the Automobile." Michigan's Automotive Industry (Vol. 37 No. 4). Detroit: Michigan Manufacturer and Financial Record, 1926.

"First Log House Built in Lansing October 13, 1841." Lansing State Journal, May 11, 1915.

Francaviglia, Richard V. "Main Street: The Origins." Timeline. Columbus: The Ohio Historical Society, December 1988/January 1989.

\_\_\_\_\_. "Main Street: The Twentieth Century." Timeline. Columbus: The Ohio Historical Society, February/March 1989.

Fuller, George N. (editor). Historic Michigan: Land of the Great Lakes. Chicago: National Historical Association, 1924.

\_\_\_\_\_. Michigan: A Centennial History of the State and Its People. Chicago: Lewis Publishing Company, 1939.

Gave, Keith. "Hammers Slowing at Forge Plants," Lansing State Journal, November 29, 1981.

Genat, Robert. The American Car Dealership. Osceola, Wisconsin: MBI Publishing 1999.

Gordon, Stephen C. How to Complete the Ohio Historic Inventory. Columbus, Ohio: The Ohio Historical Society, 1992.

Gowans, Alan. The Comfortable House: North American Suburban Architecture 1890- 1930. Cambridge, Massachusetts: The MIT Press, 1986.

Grainger, Helen E. Pictorial Lansing: Great City on the Grand. Lansing: Wellman Press, 1976.

"Greater Lansing Was Title of City in 1906." Lansing State Journal, January 28, 1930.

Heil, James C. "Early Lansing Survives in MSU's Hidden Vaults," Lansing State Journal, January 30, 1983.

Henderson, John P. "State Government Auto Trade Made Lansing." Lansing State Journal, May 24, 1959.

Hyde, Charles K. Historic Highway Bridges of Michigan. Detroit: Wayne State University Press, 1993.

\_\_\_\_\_. "The Lower Peninsula of Michigan: An Inventory of Historic Engineering and Industrial Sites." Historic American Engineering Record (1976): 268-269.

Jacobson, Helen and Jane Wilson. Lansing: A Look to the Past. Lansing: Saint Paul's Episcopal Church, 1975.

Jakle, John, and Sculle, Keith A. The Gas Station in America. Baltimore: The Johns Hopkins University Press, 1994.

Kahn, Dorothea. "Lansing Is a Thriving City Built on Many Surprises" The Christian Scientist Monitor. (November 4, 1938).

Kestenbaum, Justin L. Out of a Wilderness. Woodland Hills, California: Windsor Publications, 1981.

Klines, Clark. Standard Catalog of American Cars (3<sup>rd</sup> Edition). Woodland Hills, California: Windsor Publications, 1996.

Kyle, P. E. The Closed Die Forming Process. New York: The Macmillan Company, 1954.

Lansing Chamber of Commerce. Lansing Michigan: A Progressive American City. Lansing: Dick Short & Company, (n.d.)

Lansing Directory Publishers, Inc. Lansing and East Lansing City Directory, Lansing. 1939.

Lansing Historic District Study Committee. "Memorandum '76 Historic Lansing, Yesterday, Today and Tomorrow." On file Lansing Planning Department Library, 1976.

Lansing Journal. Greater Lansing 1859-1906. Lansing: Journal Publishing Company, (n.d.)

"Lansing Recovering from Financial Depression of 1893-1897." State Journal 20<sup>th</sup> Century Edition. Lansing, Michigan, 1902.

Lansing Regional Chamber of Commerce. A Brief History of the City of Lansing, Michigan. Lansing: Lansing Regional Chamber of Commerce, 1988.

Lansing State Journal. Lansing and its Yesterdays. Lansing: Lansing State Journal Publishing, 1936.

Liebs, Chester H. Main Street to Miracle Mile: American Roadside Architecture. Baltimore: The Johns Hopkins University Press, 1985.

Longstreth, Richard. The Buildings of Main Street: A Guide to American Commercial Architecture. Washington, D. C.: The Preservation Press/National Trust for Historic Preservation, 1987.

Manassah, Sallie M., Thomas, David A. and Wallington, James F. Lansing: Capital, Campus and Cars. Lansing: City of Lansing Planning Department, 1986.

May, George S. A Most Unique Machine: The Michigan Origins of the American Automobile Industry. Grand Rapids, Michigan: William B. Eerdmans Publishing Company, 1975.

McAlester, Virginia and McAlester, Lee. A Field Guide to American Houses. New York: Alfred A. Knopf, 1986.

McKinley Publishing. Lansing City Directory. Lansing: McKinley Publishing, 1933.

McKinley-Reynolds Publishing. Lansing City Directory. Lansing: McKinley-Reynolds Publishing, 1924.

\_\_\_\_\_. Lansing City Directory. Lansing: McKinley-Reynolds Publishing, 1929.

Michigan Department of Transportation. Making Michigan Move: A History of Michigan Highways and the Michigan Department of Transportation. Lansing: Michigan Department of Transportation, 1980.

Morrison, Roger. "The History and Development of Michigan Highways," (research paper), Ann Arbor: University of Michigan, 1938.

Mudge, Charles E. Mudge's Directory of Lansing City. Lansing, 1878.

"Olds Motor Works." Automobile Trade Journal (Silver Anniversary Vol. 29 No. 6), December 1, 1924.

"Only Two General Stores Greeted Traders in 1847." Lansing State Journal, April 28, 1955.

Our 50<sup>th</sup> Year: Motor Wheel Corporation 1920-1970. Lansing: Motor Wheel Public Relations Department [1970].

Peters, Kenneth Earle. "*The Good Road Movement and the Michigan State Highway Department 1905-1917*." Ann Arbor: University of Michigan research paper, 1972.

Pfaff, Dave. The Motor Vehicles of Lansing from 1882 to 2003. DeWitt, Michigan. Privately published. 2002.

\_\_\_\_\_. R. E. Olds and Automotive Related Sites in Lansing, Michigan. DeWitt, Michigan. Privately published, 2003.

Pitt, Earle R. "You Might Say It Was the Age of Wood." Lansing State Journal, April 28, 1955.

Polk, R. L. & Co. Lansing City and Ingham County Directory for 1887. Detroit: R. L. Polk & Co., 1887.

\_\_\_\_\_. Lansing City Directory. Detroit: R. L. Polk & Co., 1888.

\_\_\_\_\_. Lansing City Directory. Detroit: R. L. Polk & Co., 1889.

\_\_\_\_\_. Lansing City Directory. Detroit: R. L. Polk & Co., 1945.

Poore, P. "American Tudor (1895-1945)." Old-House Journal, Vol. XXVIII (No. 4), pp. 75-81.

Pound, Arthur. The Turning Wheel: The Story of General Motors Through 25 Years, 1908-1933. Garden City, New York: Doubleday, Doran & Co., 1934.

Rae, John B. The American Automobile: A Brief History. Chicago: The University of Chicago Press, 1965.

Rogers, Frank Foster. History of the Michigan State Highway Department 1905-1933. Lansing: Franklin DeKline Co., 1933.

Rosentreter, Roger L. (editor) "Michigan Made: 100 Years of the Automobile." Michigan History Magazine, March/April 1996.

Rusinoff, S. E. Forging and Forming Metals. Chicago: American Technical Society, 1952.

Schneider, Robert and Laurie Sommers. "Final Report for a Reconnaissance Level Survey of Historic and Architectural Resources in Lansing's Central Neighborhoods." Lansing, Michigan: State Historic Preservation Office, Research Report on file, 1986.

Smith, Donald N. Technological Change in Michigan's Tool and Die Industry. Ann Arbor: The University of Michigan, 1968.

Smith, Philip Hillyer. Wheels Within Wheels: A Short History of American Motor Car Manufacturing. New York: Funk & Wagnalls, 1968.

Society of Automotive Engineers Historical Committee. The Automobile: A Century of Progress. Warrendale, Pennsylvania: Society of Automotive Engineers, Inc. 1997.

Stimson, G. K. "Historic Background of Michigan Transportation." Michigan Roads and Pavements Vol. XXII No. 1-2 (1925).

"Three Local Firms Merged to Form Motor Wheel Corporation." Lansing State Journal, May 24, 1959.

Turner, Frank N. "An Account of Ingham County from its Organization." Historic Michigan, Land of the Great Lakes Vol. 3, (edited by George N. Fuller). Chicago: National Historical Association, 1924.

Vieyra, Daniel I. Fill 'er Up: An Architectural History of America's Gas Stations. New York: Macmillan Publishing Co., Inc, 1979.

Visions Sports Management Group. Through the Years: A Pictorial History of Greater Lansing 1847-1997. Marceline, Montana: Walsworth Printing, 1997.

Washburn, Carolyn Kramer. "Shakeout of Forging Industry Pits Tough Breed of Survivors." Lansing State Journal, March 17, 1985.

"Wheels for America's Automobiles." Lansing State Journal, April 28, 1955.

Wren, James A. and Wren, Genevieve J. Motor Trucks of America. Ann Arbor: University of Michigan Press, 1979.

## CREDITS

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- Plate 5: : General collection of the FPML/CADL.
- Plate 6: Lansing City Directory, Chilson & McKinley, 1906.
- Plate 9: Catorino collection, CADL.
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- Plate 17: Catorino collection, CADL
- Plate 20: Stebbins collection, CADL
- Plate 25: Stebbins collection, CADL
- Plate 27: Stebbins collection, CADL

## **APPENDIX A**

Site Identified Through Targeted Research and Field Verification

**THEMATIC SURVEY OF EARLY AUTOMOTIVE HISTORY IN LANSING, MICHIGAN**

NAME	ADDRESS	DATE	SERVICE
Charles Blades House	230 Butler S.		
Werts Service Station	334 Butler S.	1930	Gas & Oil Co's (Retail)
Ray Potter House	1348 Cambridge	1926	
Harry Harper House	1408 Cambridge		
George Bohnet House	601 Capitol N.		
William Newbrough House	615 Capitol N.		
Crane J R	427 Capitol S.	1930	Auto Trim & Body Repairing
G & A Body Works	427 Capitol S.	1930	Auto Trim & Body Repairing
Dean and Harris	1127 Cedar N.	c 1923	Auto Showroom
Standard Oil Co.	410 Cedar S.	1910-30	Gas & Oil Co's (Retail)
Estafan Tire Shop	1703 Cedar S.	1925	Automobile Tire and Accessories
International Harvester Co.	2831 Cedar S.	1930	Auto Truck Dealers
Sablain Garage	2831 Cedar S.	1930	Garages & Service
Kamm & Smith	2902 Cedar S.	1930	Tool & Die
William B. Smith Garage	2902 Cedar S.	1928	Garage
Cities Service Oil Co.	711 Center	1930	Gas & Oil Co's (Retail)
Raymond Chevrolet Sales	1211-1215 Center	1925-30	Auto Truck Dealers, Auto Tires and Accessories
Elmer Dail House	1204 Genesee N.		
Ernest Dail House	1306 Genesee N.		
North Side Electric Shop	115 Grand River E.	1920	Automobile Accessories
Lansing Commercial Body Co.	116 Grand River E.	1925	Automobile And Truck Body Mfrs
North Lansing Tire Co.	119 Grand River E.	1920	Automobile Tire Dealers & Repairers
Franklin Avenue Garage	418 Grand River E.	1920	Garages & Repairings
North Lansing Garage	418 Grand River E.	1915	Automobile Sales Agents, Garages, Machine Shops
Bates Tractor Co.	700 Grand River E.	1915	Gas Engine Manufacturers
Bates Wohlert Co.	700 Grand River E.	1930	Auto Parts Manufacturers
Capitol Heights Filling Station	1223 Grand River E.	1930	Gas & Oil Co's (Retail)
Pulver Bros.	127 Grand River W.	1923	Filling Station
James Seager House	533 Grand S.		
Duplex Truck Co.	732 Hazel E.	1925-30	Automobile Truck Manufacturers & Dealers
John Bean Manufacturing Co.	735 Hazel E.	1930	Gas Engine Mfrs & Dealers
Kold-Hold Manufacturing	735 Hazel E.		
Birchfield's Pattern & Mfg Co.	326 Hosmer S.	1910	Machine Shops
Ebel Hoist & Pump Co.	326 Hosmer S.	1930	Gas Engine Mfrs & Dealers
Lansing Motor & Pump Co.	326 Hosmer S.	1906-25	Gas & Gasoline, Engine, Motor, Pump Manufacturers
Michigan Screw Co.	506 Hosmer S.	1915	Automobile Parts Manufacturers
Hugo Lundberg House	1701 Jerome		
Thomas Harris House	1712 Jerome		
Whiteley Peerless Sales	731 Kalamazoo E.	1930	Auto Dealers, Garages & Service
Kramer Co.	800 Kalamazoo E.	1930	Auto Parts Dealers
Liberty Garage	810 Kalamazoo E.	1930	Garages & Service
Smith Max	810 Kalamazoo E.	1925	Garages and Service Stations
Root's Garage	812 Kalamazoo E.	1930	Garages & Service
Square Deal Auto Body Co.	826 Kalamazoo E.	1930	Auto Trim & Body Repairing
Fleming Motor Sales Co.	112 Larch N.	1925	Automobile Sales Agents, Garages and Service Stations
Forncrook Automotive	124 Larch N.	1925	Garages and Service Stations
Dyer's Garage	125 Larch N.	1930	Garages & Service
H & H Body Co.	130 Larch N.	1930	Auto Painting, Trim & Body Repairing
Tarbell Machine	319 Larch N.	1925	
Roxanna Gas Station	401 Larch N.	1928	Gasoline Station
Auto Wheel Co.	1508 Larch N.	1910	Automobile Wheel Manufacturers
Gier Pressed Steel	1508 Larch N.	1916	Automobile Wheel and Parts Manufacturer
Forncrook Automotive Supply Co.	124-126 Larch N.	1930	Auto Tires, Accessories & Vulcanizing
Bill's Garage	101 Larch S.	1930	Garages & Service
Acme Garage	102 Larch S.	1930	Garages & Service
Benders Pattern Works	113 Larch S.	1915	
Kirchen Machine Co.	113 Larch S.	1925	
Michigan Sheet Metal Works	116 Larch S.		
Cogswell Bros.	214 Larch S.		
Oberlin Sheet Metal	214 Larch S.	1920	
Lansing Auto Supply Co.	110-112 Larch S.	1930	Auto Tires, Accessories & Vulcanizing
Dail Steel	750 Main E.		
Lansing/Federal Drop Forge Co.	2807 Martin Luther King	1930	Drop Forges
Lindell Drop Forge Co.	Martin Luther King	1930	Drop Forges
W K Prudden & Co.	701 May	1906-15	Automobile Wheel & Parts Manufacturers
Blanding F J Co.	300 Michigan E.	1920-25	Automobile Sales, Accessories, Tires, Truck Mfr & Dealers
Ford Sales & Service	300 Michigan E.	1920	Garages & Repairings
Auto Tire Repair Co.	318 Michigan E.	1920-25	Automobile Accessories, Tire Dealers & Repairs

**THEMATIC SURVEY OF EARLY AUTOMOTIVE HISTORY IN LANSING, MICHIGAN**

NAME	ADDRESS	DATE	SERVICE
Larry's Auto Supplies	318 Michigan E.	1930	Auto Tires, Accessories & Vulcanizing
E E Howey	420 Michigan E.	1930	Auto Tires, Accessories & Vulcanizing
National Coil Co.	420 Michigan E.	1906-10	Automobile Specialties, Supplies Manufactures
Lansing Tent & Awning	422 Michigan E.	1924-29	
Peez Oil Corp	614 Michigan E.	1930	Gas & Oil Co's (Retail)
Beck Bros Service Station	615 Michigan E.	1920-30	Automobile Accessories, Tire Dealers & Repairs, Vulcanizing
Rose Tire Co.	615 Michigan E.	1920	Automobile Tire Dealers & Repairers
D E Ray	622 Michigan E.	1930	Auto Tires, Accessories & Vulcanizing
Abel Motor Sales	726 Michigan E.	1930	Garages & Service
Schreiber Auto Supply	800 Michigan E.	1925	Automobile Tire and Accessories
Aaron DeRoy Motor Car Co.	827 Michigan E.	1930	Garages & Service
Wonch Auto Supply	2006 Michigan E.	1925	Automobile Tire and Accessories
East Side Auto Service	2224 Michigan E.	1930	Garages & Service
Gooding's Garage	2511 Michigan E.	1930	Garages & Service
Greenhalgh Edward	2511 Michigan E.	1925	Garages and Service Stations
Ford & Fordson Sales and Service	300-306 Michigan E.	1920-25	Garages and Service Stations
Sears, Roebuck & Co.	300-306 Michigan E.	1930	Auto Tires, Accessories & Vulcanizing
Allen Sparks Gas Light Co.	418-422 Michigan E.	1920	Automobile Accessories, Tire Dealers & Repairers
Allen Sparks Gas Light Co.	418-422 Michigan E.	1925	Automobile Tire and Accessories
Allen Sparks Gas Light Co.	420-422 Michigan E.	1915	Automobile Accessories, Tire Repairing
Clawson Smith	420-422 Michigan E.	1906	Automobile Dealers
Robbins Motor Sales	604-608 Michigan E.	1930	Auto Dealers, Garages & Service
Abel Motor Sales	726-732 Michigan E.	1930	Auto Dealers
Bates & Edmonds Motor Co.	238 Mill	1906-30	Gas Engine Manufacturer and Gasoline
A. Crossman Pratt House	631 Moores River		
Wallace Olds House	1908 Moores River		
Atlas Drop Forge Co.	209 Mt. Hope W.	1930	Drop Forges
Schaible Gas Station	220 North E.		
New Way Motor Co.	704 Oakland E.	1920	Garages & Repairings
New Way Motor Co.	704 Oakland E.	1906-30	Gas & Gasoline Engine & Motor Mfs
Demmer Corp.	705 Oakland E.		
Hildreth Manufacturing Co.	700 Porter	1910	Gas & Gasoline Engine & Motor Mfrs
Novo Engine Co.	700 Porter	1915-30	Foundries, Gas Engine Manufacturers and Dealers
Cady, Glassbrook & Co.	1131 Race	1889	Founders & Machinists
Hildreth Motor & Pump Co.	1131 Race	1906	Foundries, Motor & Pump Manufacturers
Standard Aluminum Casting Co.	1131 Race	1915-25	Foundries
Jarvis Engine & Machine Wks	905 River	1906-15	Boiler Shops, Machine Shops
Jarvis Engine & Machine Works	905 River	1906	Foundries
Capitol City Service	1035 Saginaw E.	1930	Auto Trim & Body Repairing
Freeman & Pedersen	1035 Saginaw E.	1930	Gas & Oil Co's (Retail)
Motor Wheel Corporation	701-735 Saginaw E.	1920-30	Automobile Wheel Manufacturers
Prudden Wheel Plant	701-735 Saginaw E.	1920	Automobile Wheel Manufacturers
Durant Showroom	901 Saginaw W.		
Lansing Tire Co.	111-117 Shiawassee E.	1930	Auto Tires, Accessories & Vulcanizing and Services
South Lansing Garage	117 Smith	1930	Garages & Service
Lansing Auto Service	111 South E.	1930	Garages & Service
Lyons Hugh & Co.	700 South E.	1920-30	Automobile Truck Body Manufacturers, Auto Dealers
B.S. Gier House	301 Sycamore N.		
Melling Forging Co.	1709 Thompson	1930	Drop Forges
Grammel Rudolph G.	1219 Turner	1906	Harness Manufacturers & Dealers
Lansing Hood & Fender Co.	1222 Turner	1920	Automobile Radiator Repairing
Bancroft Oren S.	1224 Turner	1906	Livery & Hack Barns
Rowland Jay L.	1228 Turner	1930	Gas & Oil Co's (Retail)
Brown Benjamin	1236 Turner	1930	Garages & Service
Schubel Trim & Body Service	1238 Turner	1930	Auto Painting Companies
Lansing Tire & Rubber Repair Co.	1242 Turner	1915	Automobile Tire Repairing
Walter & Son (Inc)	1210-1212 Turner	1920-30	Auto Tires, Accessories & Vulcanizing
Bennett-Buick Auto Co.	1236-1238 Turner	1915	Garages
Browns Garage	1236-1238 Turner	1925	Garages and Service Stations
Century Garage	1236-1238 Turner	1920	Garages & Repairings
Schubel Trim & Body Service	1236-1238 Turner	1930	Auto Trim, Body, Windshield Repairing
Dunham Hardware Co.	1242-1250 Turner	1906	Carriage & Wagon Dealers, Harness Manufacturers
Capitol Heights Auto Paint Shop	1516 Vermont	1920-25	Automobile Manufacturers, Painting & Trimming
William W. Peterson	1516 Vermont	1930	Auto Painting Companies
Capitol Heights Auto Trimming Co.	1420-1422 Vermont	1925-30	Automobile Tops, Seat Covers & Cushion Manufacturers
Capitol Heights Auto Painting Center	1420-22 Vermont	1920	Automobile Painting & Trimming Companies
Duo Service	803 Vine	1930	Auto Body Parts & Brake Service, Washing and Lubricating
Central Garage	1122 Washington N.	1920	Garages & Repairings

**THEMATIC SURVEY OF EARLY AUTOMOTIVE HISTORY IN LANSING, MICHIGAN**

<b>NAME</b>	<b>ADDRESS</b>	<b>DATE</b>	<b>SERVICE</b>
Lansing Service Garage	1122 Washington N.	1930	Garages & Service
S & K Garage	1125 Washington N.	1925	Garages and Service Stations
D & A Sales	315 Washington S.	1920	Automobile Accessories, Tire Dealers & Repairers
D & A Sales Co.	315 Washington S.	1920	Automobile Tire Dealers & Repairers
James J. Smith	323 Washington S.	1925	Garages and Service Stations
John H. Larrabee	325 Washington S.	1906	Bicycles & Repairing
Lansing Vulcanizing	329 Washington S.	1920	
Marks Auto Accessories	406 Washington S.	1925	Automobile Tire and Accessories
Electric Service Co.	408 Washington S.	1920	Automobile Accessories, Tire Dealers & Repairers
D & A Sales Co.	1114 Washington S.	1915	Garages
Carl Schopp Auto Sales	1114 Washington S.	1930	Auto Tires, Accessories & Vulcanizing, Garages & Service
Dort Sales & Service	1116 Washington S.	1920	Automobile Service Stations
Jordan Sales & Service	1116 Washington S.	1920	Automobile Service Stations
South Lansing Garage	1116 Washington S.	1920	Automobile Tire Dealers & Repairers
Standard Oil Station	1501 Washington S.	1923	
Duplex Truck Co.	2100 Washington S.	1920	Automobile Truck Mfrs & Dealers
Duplex Truck	2100 Washington S.		
D & A Sales Co.	1114-1116 Washington S.	1915	Automobile Sales Agents
Schopp Carl Auto Sales	1114-1116 Washington S.	1930	Auto Dealers
South Lansing Garage	1114-1116 Washington S.	1920	Automobile Accessories, Sales, Garages & Repairings

## **APPENDIX B**

### Location of Surveyed Sites

**THEMATIC SURVEY OF EARLY AUTOMOTIVE HISTORY  
KEY TO SURVEYED SITES IN LANSING, MICHIGAN**

NAME	ADDRESS	ID NO.
Abel Motor Sales	726 Michigan E	1
Hugo Lundberg house	1701 Jerome	2
James Seager house	533 Grand S	3
Standard Oil Company bulk facility	410 Cedar S	4
Burton S. Gier house	301 Sycamore N	5
Roxanna Gas Station	401 Larch N	6
Ernest Dail house	1306 Genesee N	7
Elmer Dail house	1204 Genesee N	8
Prudden Wheel	725 Saginaw E	9
New Way Motor Company	704 Oakland E	10
Duplex Truck	2100 Washington S	11
Standard Oil Company filling station	1501 Washington S	12
Harry Harper house	1408 Cambridge	13
Ray Potter house	1348 Cambridge	14
Dail Steel	1000 Hosmer S	15
Atlas Drop Forge Company	209 Mt. Hope W	16
Hugh Lyons & Company	701 South E	17
Lansing Motor & Pump	326 Hosmer S	18
Cady & Hildreth Company	1131 Race	19
Gier Pressed Steel	1508 Larch N	20
Melling Forging Company	1709 Thompson	21
Novo Engine Company	705 Oakland E	22
Novo Engine Company	700 Porter	23
Pulver Brothers Filling Station	127 Grand River W	24
Dean & Harris	1127 Cedar N	25
Lansing Commercial Body Company	116 Grand River E	26
Capitol Heights Filling Station	1223 Grand River E	27
Turner Street hack barn	1224 Turner	28
Raymond Chevrolet Sales	1213 Center	29
Michigan Screw Company	506 Hosmer S	30
Liberty Garage	810 Kalamazoo E	31
Root's Garage	812 Kalamazoo E	32
Kramer Company	800 Kalamazoo E	33
Square Deal Auto Body Company	826 Kalamazoo E	34
Whiteley Peerless Sales	731 Kalamazoo E	35
Aaron DeRoy Motor Car Company	827 Michigan E	36
S & K Garage	1125 Washington N	37
Bates-Wohlert Company	708 Grand River E	38
Central Garage	1122 Washington N	39
Charles Blades house	230 Butler S	40
Peez Oil Corporation	614 Michigan E	41
Fleming Motor Sales Company	112 Larch N	42
Forncrook Automotive Supply Company	124 Larch N	43
Federal Drop Forge	2807 Martin Luther King Blvd S	44
Duplex Truck Company	732 Hazel E	45
Allen Sparks Gas Light Company	418 Michigan E	46
Wolverine/Cities Service Oil Company	711 Center	47
Harris Thomas house	1712 Jerome	48
H & H Body Company	130 Larch N	49
Schaible Gas Station	220 North E	50
Lindell Drop Forge Company	2830 Martin Luther King Blvd S	51
Jarvis Engine & Machine Works	905 River	52

**Legend**

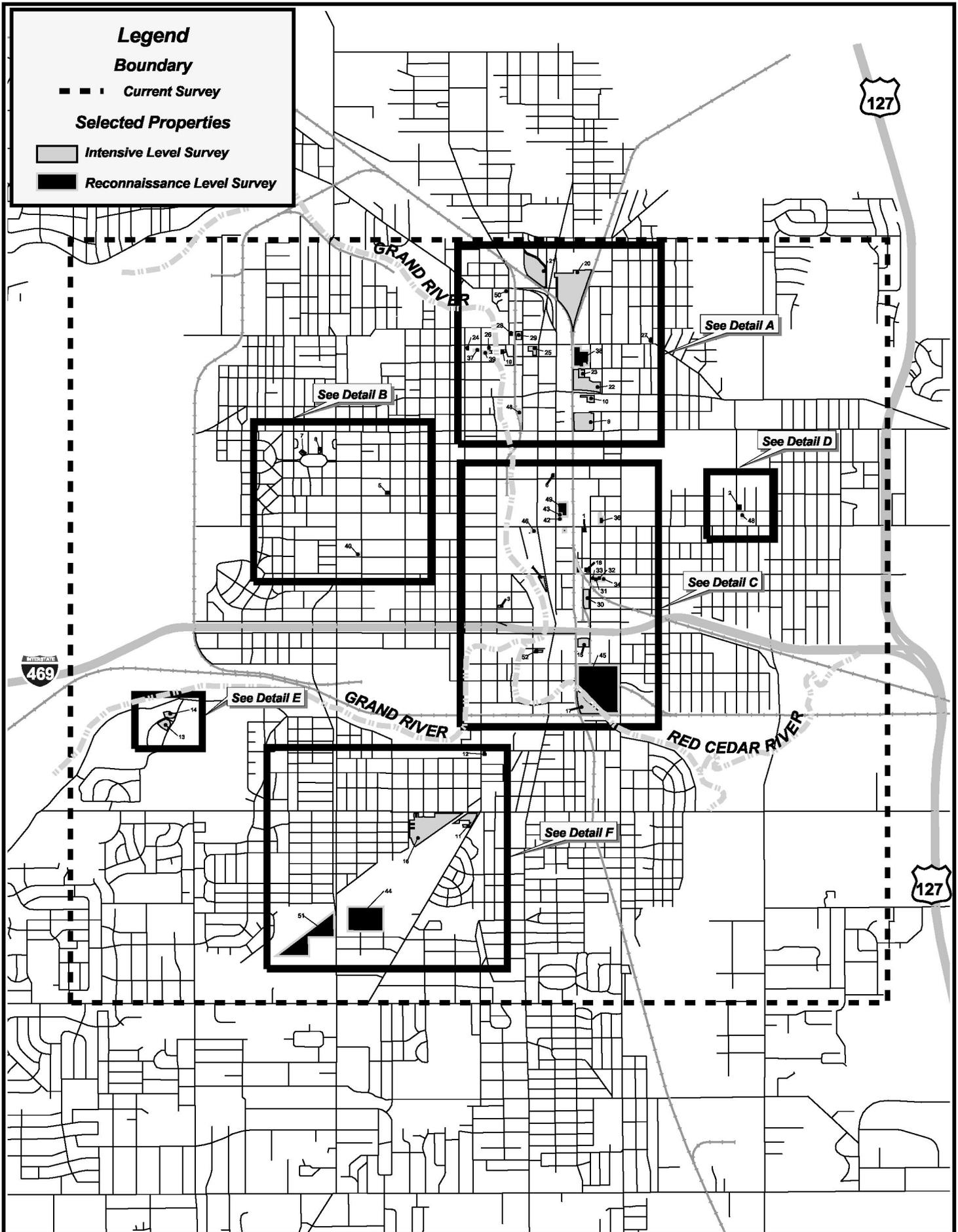
**Boundary**

--- Current Survey

**Selected Properties**

Intensive Level Survey

Reconnaissance Level Survey



Project # LANATA June 2003

**Mannik & Smith**  
 The Group  
 1800 Indian Wood Circle  
 Maumee, Ohio 43537  
 Civil Engineering, Surveying and Environmental Consulting  
 TOLEDO ♦ MONROE ♦ DETROIT

**Thematic Survey of Automotive History  
 in Lansing, Michigan  
 Location of Surveyed Sites  
 General**

**Notes**  
 Parcel map and streets map provided  
 by the City of Lansing Department of  
 Planning and Neighborhood  
 Development.



**Legend**

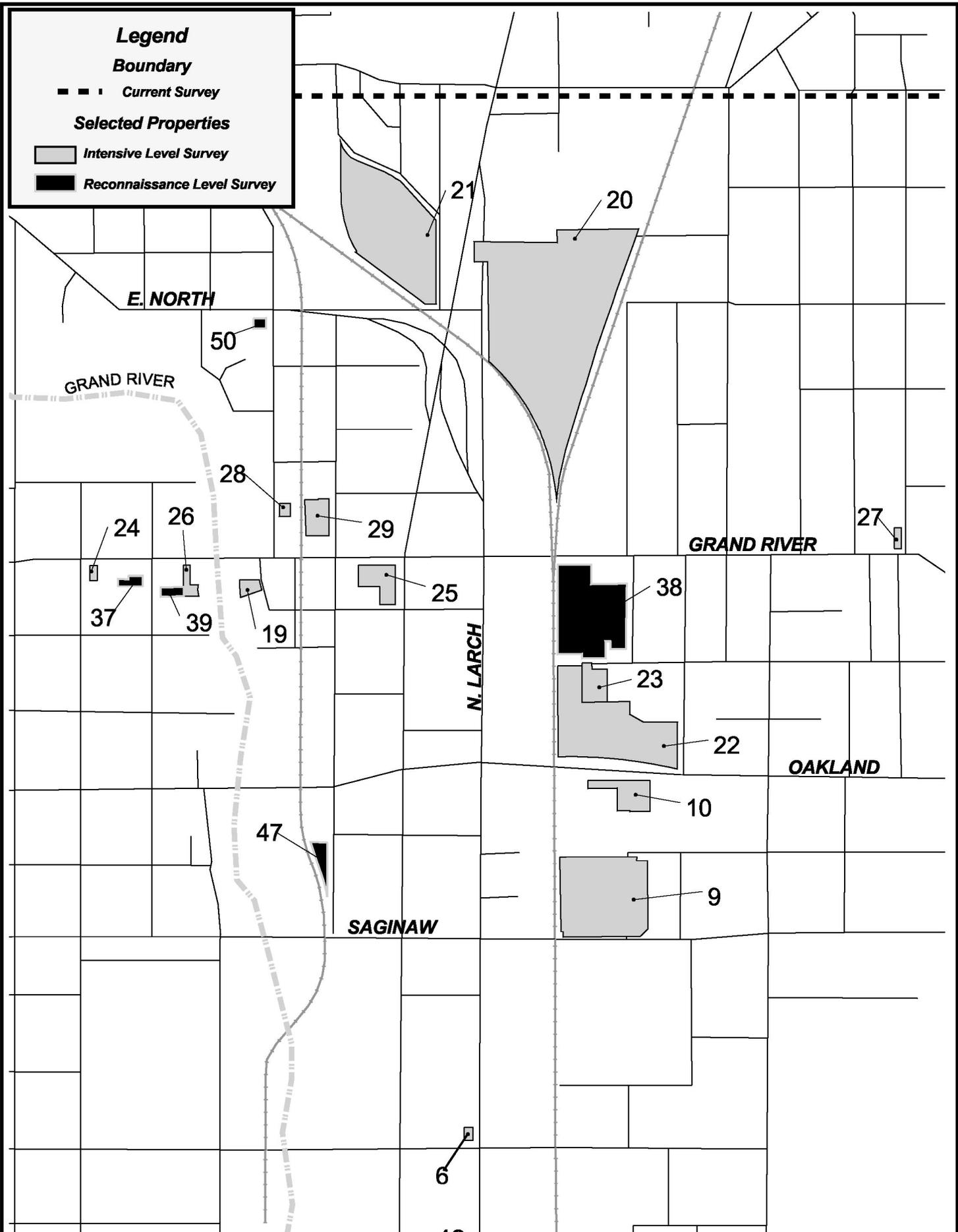
**Boundary**

--- Current Survey

**Selected Properties**

▭ Intensive Level Survey

■ Reconnaissance Level Survey



Project # LANATA June 2003

**Mannik & Smith**  
The Group  
1800 Indian Wood Circle  
Maumee, Ohio 43537  
Civil Engineering, Surveying and Environmental Consulting  
TOLEDO ♦ MONROE ♦ DETROIT  
(419) 891-2222  
Fax: (419) 891-1595

**Thematic Survey of Automotive History  
in Lansing, Michigan  
Location of Surveyed Sites  
Detail A**

**Notes**

Parcel map and streets map provided by the City of Lansing Department of Planning and Neighborhood Development.



**Legend**

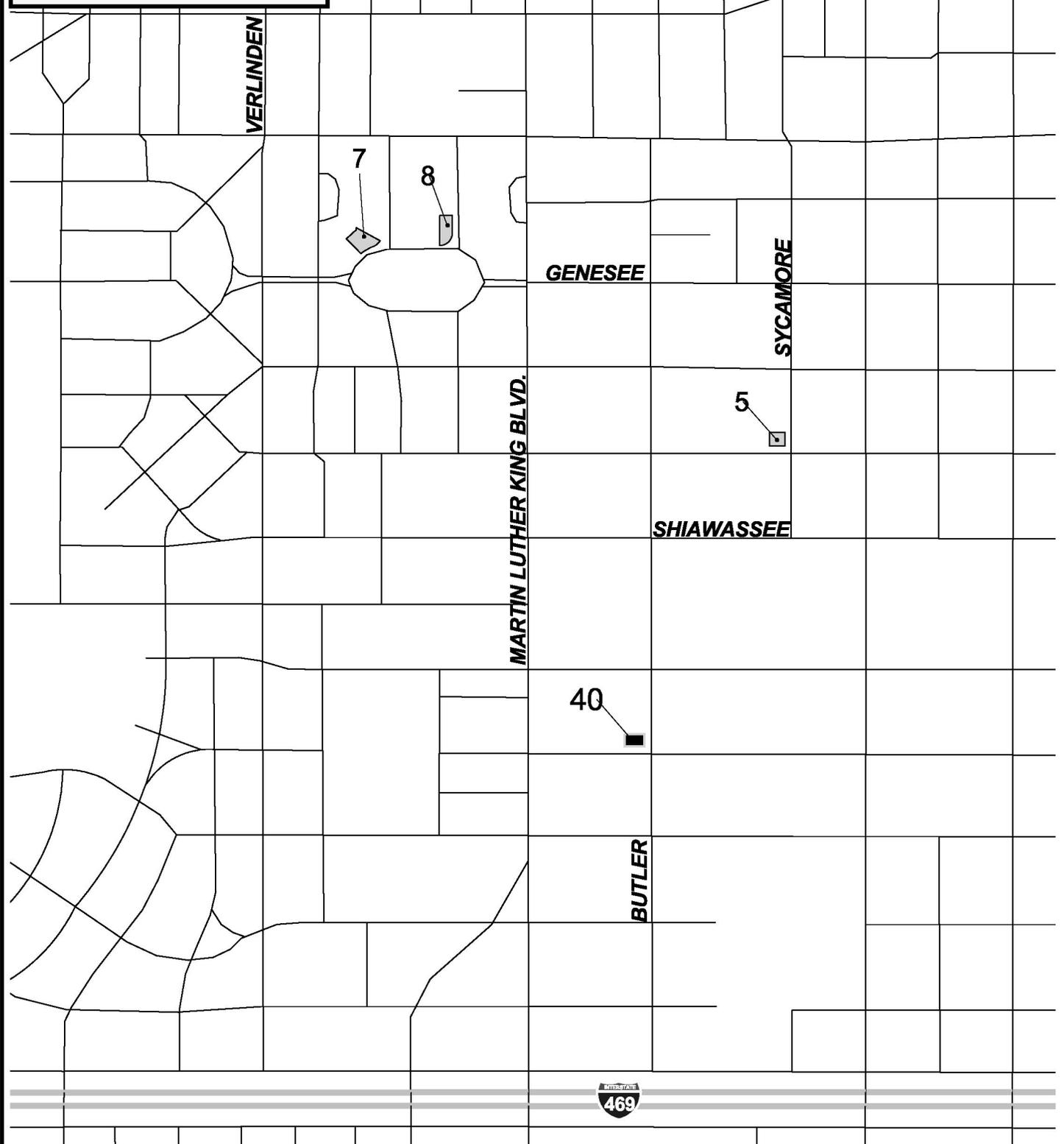
**Boundary**

■ ■ ■ Current Survey

**Selected Properties**

▭ Intensive Level Survey

■ Reconnaissance Level Survey



Project # LANA1A June 2003

**Mannik & Smith**  
The Group  
1800 Indian Wood Circle  
Maumee, Ohio 43537  
Civil Engineering, Surveying and Environmental Consulting  
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(419) 891-2222  
Fax: (419) 891-1595

**Thematic Survey of Automotive History  
in Lansing, Michigan  
Location of Surveyed Sites  
Detail B**

**Notes**

Parcel map and streets map provided by the City of Lansing Department of Planning and Neighborhood Development.



**Legend**

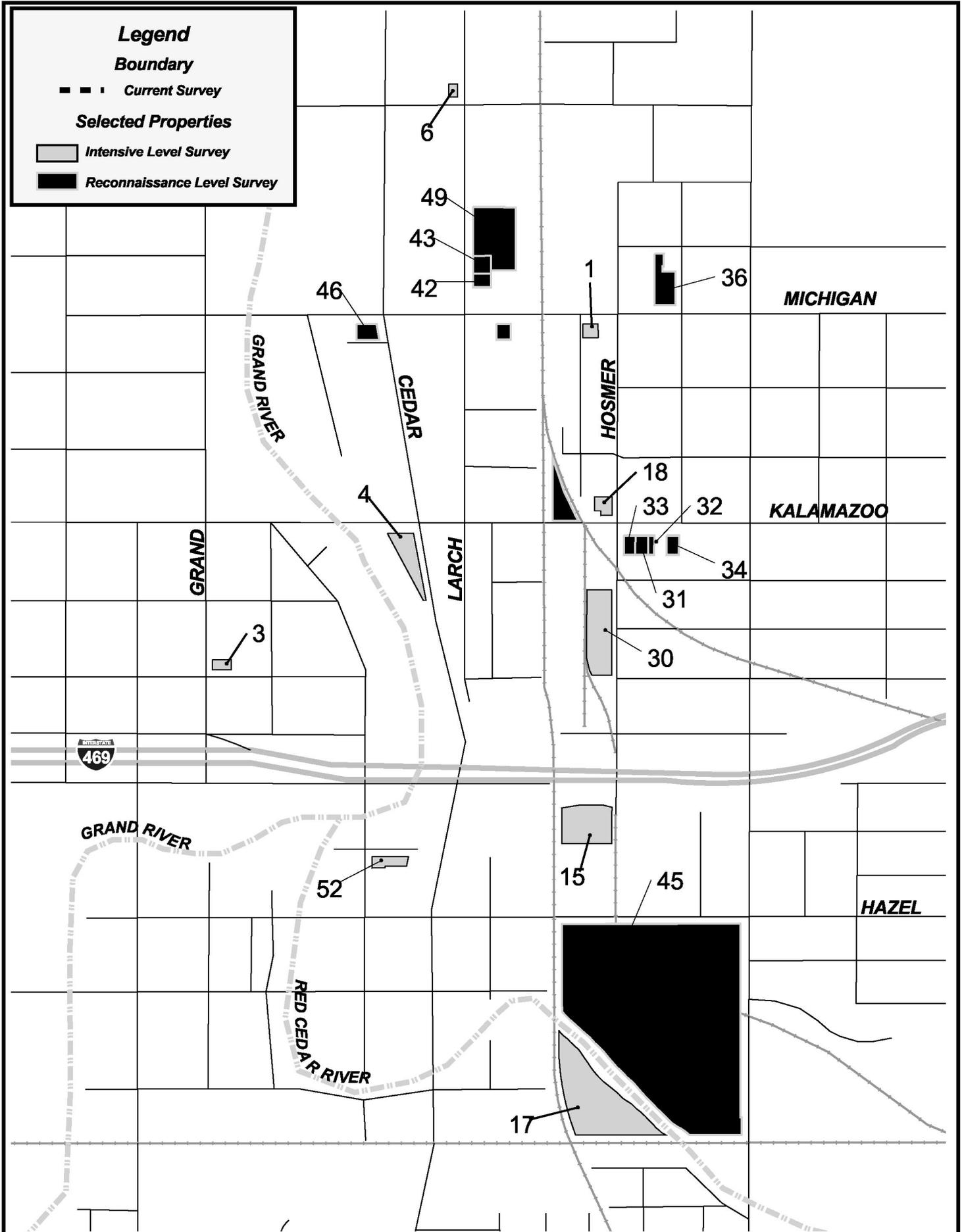
**Boundary**

--- Current Survey

**Selected Properties**

▭ Intensive Level Survey

■ Reconnaissance Level Survey



Project # LANATA June 2003

**Mannik & Smith**  
The Group  
1800 Indian Wood Circle  
Maumee, Ohio 43537  
Civil Engineering, Surveying and Environmental Consulting  
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Fax: (419) 891-1595

**Thematic Survey of Automotive History  
in Lansing, Michigan  
Location of Surveyed Sites  
Detail C**

**Notes**

Parcel map and streets map provided by the City of Lansing Department of Planning and Neighborhood Development.



**Legend**

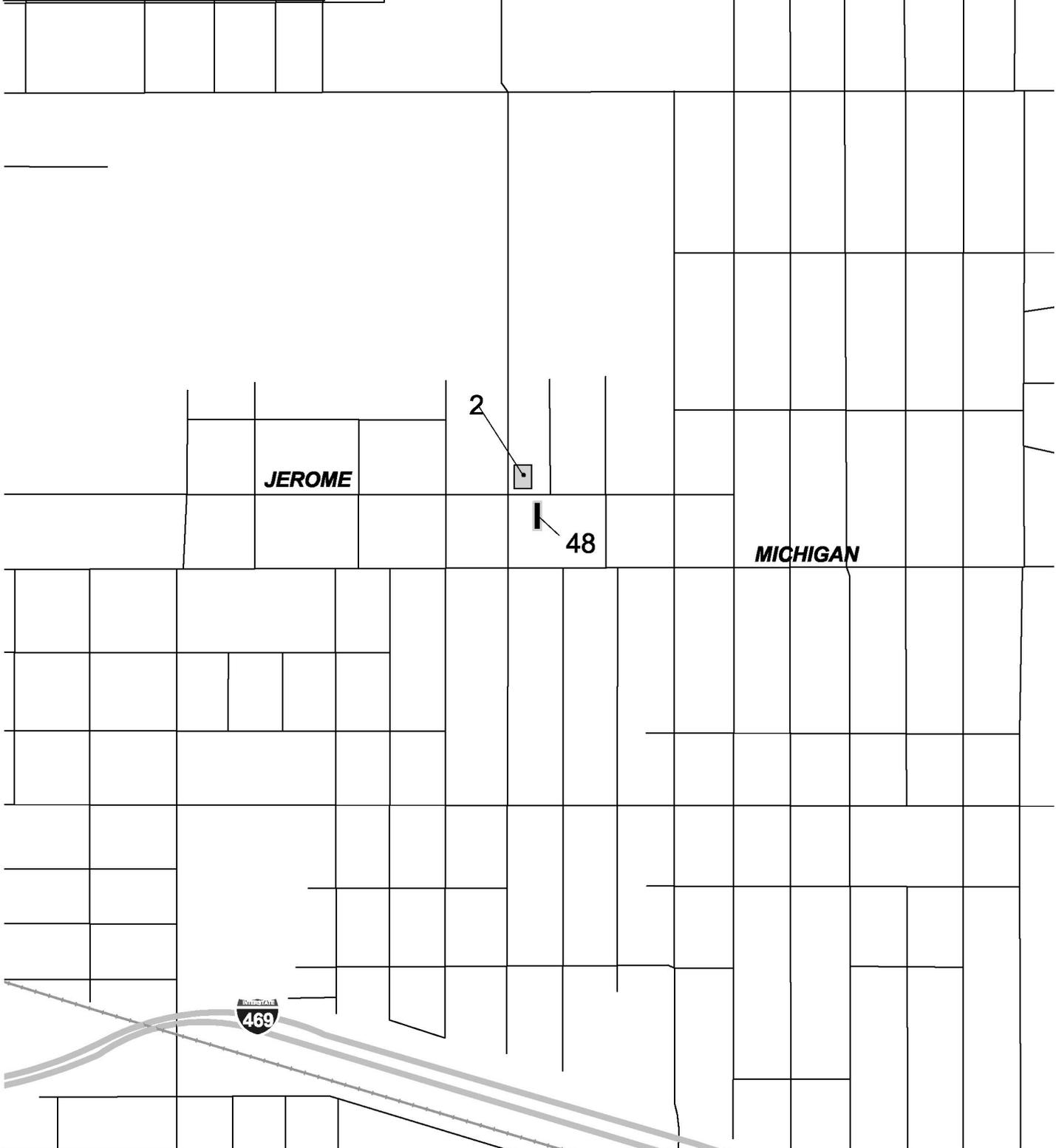
**Boundary**

■ ■ ■ Current Survey

**Selected Properties**

□ Intensive Level Survey

■ Reconnaissance Level Survey



Project # LANA1A June 2003

**Mannik & Smith**  
The Group  
1800 Indian Wood Circle  
Maumee, Ohio 43537  
Civil Engineering, Surveying and Environmental Consulting  
TOLEDO ♦ MONROE ♦ DETROIT  
(419) 891-2222  
Fax: (419) 891-1595

**Thematic Survey of Automotive History  
in Lansing, Michigan  
Location of Surveyed Sites  
Detail D**

**Notes**  
Parcel map and streets map provided  
by the City of Lansing Department of  
Planning and Neighborhood  
Development.



**Legend**

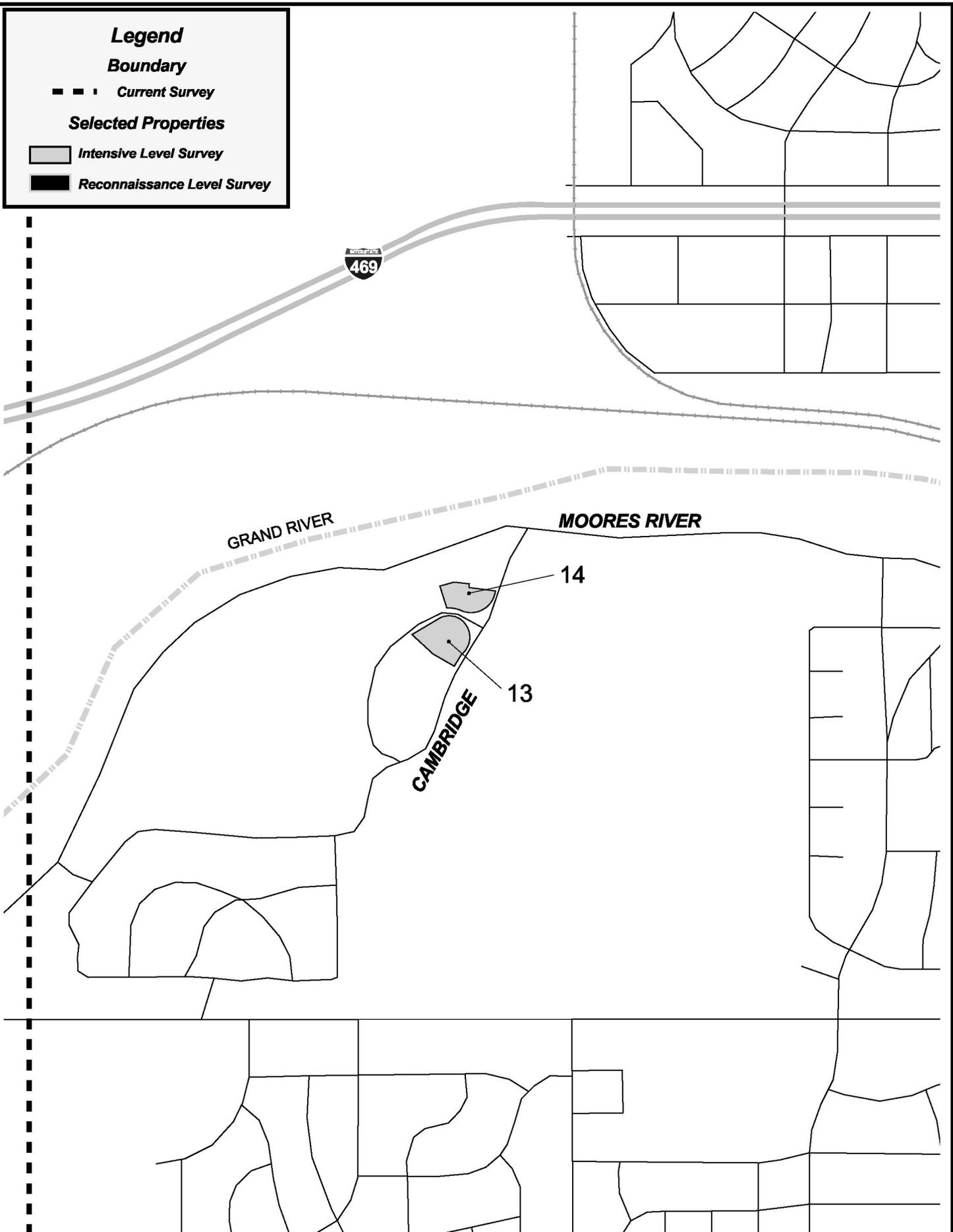
**Boundary**

--- Current Survey

**Selected Properties**

Intensive Level Survey

Reconnaissance Level Survey



Project # LAN1A14 June 2003

**Mannik & Smith**  
The Group  
1800 Indian Wood Circle  
Maumee, Ohio 43537  
Civil Engineering, Surveying and Environmental Consulting  
TOLEDO ♦ MONROE ♦ DETROIT

(419) 891-2222  
Fax: (419) 891-1595

**Thematic Survey of Automotive History  
in Lansing, Michigan  
Location of Surveyed Sites  
Detail E**

**Notes**  
Parcel map and streets map provided  
by the City of Lansing Department of  
Planning and Neighborhood  
Development.

N  
1" = 800'

**Legend**

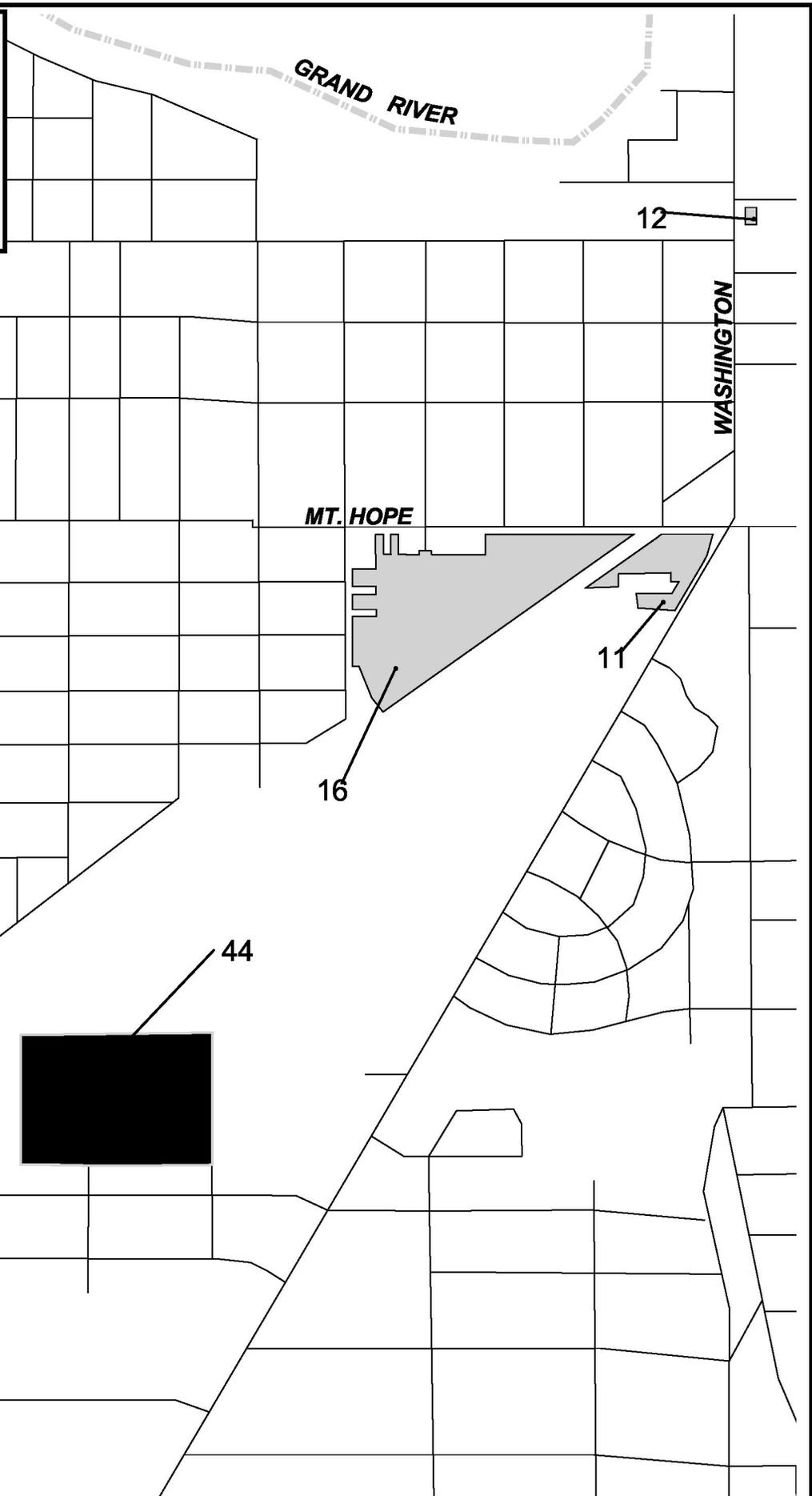
**Boundary**

--- Current Survey

**Selected Properties**

Intensive Level Survey

Reconnaissance Level Survey



Project # LANA1A June 2003

**Mannik & Smith**  
The Group  
1800 Indian Wood Circle (419) 891-2222  
Maumee, Ohio 43537 Fax: (419) 891-1595  
Civil Engineering, Surveying and Environmental Consulting  
TOLEDO ♦ MONROE ♦ DETROIT

**Thematic Survey of Automotive History  
in Lansing, Michigan  
Location of Surveyed Sites  
Detail F**

**Notes**  
Parcel map and streets map provided  
by the City of Lansing Department of  
Planning and Neighborhood  
Development.



## **APPENDIX C**

### Survey Forms

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Charles Blades House

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-17-428-191

**District Name:**

**Address:** 230 S Butler

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48915

**Original Usage:** Domestic: House

**Current Usage:**

Domestic: House

**Ownership:** Private

**Photo Information:**

**Roll** 10 **Frame:** 2

**View:** NW

**Filename:** BUTLER-S-230.TIF



**Survey Date:** 02/09/03

**Surveyor:** M. Johnson

**Record Date:** 04/12/03

**Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:**

**SR:**

**NHL:**

**CF:**

**ER Project Number:**

**Date of Construction:** 1888

**Architect / Builder:**

**Description:** This residence is a wood-framed Gabled Ell with restrained Stick style details that include decorative bargeboards and vertical flat stickwork in the gable ends (on the south and east elevations). It is a two-story structure with cross gables, several open porches, and hipped front (east) bay window. In 1935 it was identified in Assessor's notes as a double house. Aside from some material alterations and porch additions, the building maintains its essential shape and form.

**Area of Significance:** Industry

**Significance:** The home of Charles Henry Blades, a blacksmith who worked with R.E. Olds on the development of a steam-powered automobile in 1887, and is credited with forging the front axle for Olds' first gas-powered automobile in 1896. Blades worked for the Olds Motor Works and in 1939 was honored as the longest-serving and oldest employee with the company. He retired in 1940, and died at his home in 1946. Significant for its association with an early autoworker and Olds employee whose career bridged both the wagon era and the automobile age.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical files; City of Lansing Assessor's Office records; Lansing City Directories (1883-1939).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** NR Eligible

**USGS Map Title:**

**Historic Name:** Ray Potter House

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-19-426-011

**District Name:**

**Address:** 1348 Cambridge

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48911

**Original Usage:** D/single dwelling

**Current Usage:**

D/single dwelling

**Ownership:** Private

**Photo Information:**

**Roll** 13 **Frame:** 9

**View:** N

**Filename:** CAMBRIDGE-1348.TIF



**Survey Date:** **Surveyor:** M. Johnson

**Record Date:** **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1926

**Architect / Builder:**

**Description:** The Potter house is a sprawling two-and-a-half-story residence with a steeply pitched, side-gabled roofline, and a prominent cross gable with extended wing wall. The first floor has a brick veneer finish; walls above are stucco with decorative half-timbering. There is a massive exterior chimney with corbelled cap on the east gable end. The front doorway opening is Tudor-arched. Picturesque casement windows with multi-pane glazing are grouped in strings of three or more. The Potter house is a textbook example of the early high-style Tudor design,

**Area of Significance:** Architecture Industry

**Significance:** The Potter house was built in 1926 for Ray Potter, the son of James W. Potter. The father made his fortune in lumber and furniture making, and later moved to banking and real estate. The son followed in his father's footsteps, eventually becoming president of Lansing National Bank. In that capacity, he was involved with major real estate and business investments throughout the city. In 1911, young Potter joined "some of the familiar industrial pioneers in the city" as a founder of the Gier & Dail Manufacturing Company. He was also a principle

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1929-1953).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1408 Cambridge

**ZipCode:** 48911

**Parcel Number:** 33-01-01-19-428-001

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Harry Harper House



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** D/single dwelling

**Current Use:** D/single dwelling

**OwnerType:** Private

**Photo**

**Filename:** CAMBRIDGE-1408.TIF

**Roll:** 10

**Frame:** 7

**View:** SE

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Brick

**Roof:** Slate

**Wall:** Stone

**Other:**

**Area of Significance:**

- 1 Architecture
- 2 Industry
- 3

**Period of Significance:** 1929-1949

**Arch/Builder:** Harold Beckett

**Date Built:** 1929

**Architectural Classification:** Tudor Revival

**Material Notes**

**Description:** The Harper house is the largest in the exclusive Cambridge Road neighborhood, and was built in 1927-29. Designed by Detroit architect Harold Beckett, it is a two-story masonry building with stone wall cladding. The roof plan is irregular, with a hipped center block and gabled side wings (north and east elevations). A round tower with conical roof is located at the juncture of the two wings on the street-facing elevation. The principal entry (with open porch) is located on the side (south) elevation, overlooking a circular drive and adjoining a detached three-bay garage. The roofing material is slate, and the eave line is punctuated with a variety of cross gable and inset dormers. Multi-pane casement windows are clustered into groupings and set within stone surrounds. There are several tall stone chimneys with decorative chimney pots. Tudor half-timbering is evident on the dormer walls on the garage, a theme that is repeated in detailing throughout the surrounding gardens and grounds.

**Other Buildings/Features** Detached 4-car stone and brick carriage house in rear (Tudor features).

**Significant Persons:** Harry Harper

**Statement of Significance:** Harry Harper was among Lansing's most prominent industrialists and civic leaders. Born in Wisconsin, Harper came to Lansing in 1903 and took a job as bookkeeper and shipping/receiving room clerk with W.K. Prudden & Company. He was subsequently appointed secretary of the company, and in 1916 was made president of the Prudden Wheel Company (successor to the parent organization). When the Motor Wheel Corporation was organized in 1920, he was named president and general manager, a position he held until his retirement in 1946. He also helped to organize the Duplex Truck Company, and was associated with a variety of other business, civic and charitable enterprises. The home he occupied until his death in 1949 is significant both historically and architecturally as a representative of the residences designed and built for Lansing's industrial elite during the 1920s.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1929-1953).

**Surveyor's Comments:** Buildings and landscaped grounds retain a high level of integrity.

**State of Michigan Historic Preservation Office  
Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1127 N Cedar

**ZipCode:** 48906

**Parcel Number:** 33-01-01-09-426-051

**City:** Lansing

**County:** Ingham

**Current Name:** Jack's Auto Repair

**Historic Name:** Dean & Harris



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** CT/auto showroom

**Current Use:** CT/auto repair garage

**OwnerType:** Private

**Photo**

**Filename:** GRANDRIVER-E-426.TIF

**Roll:** 4

**Frame:** 21

**View:** SE

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:** Concrete

**Area of Significance:**

- 1 Commerce
- 2 Transportation
- 3

**Period of Significance:** 1923-1963

**Arch/Builder:**

**Date Built:** 1923

**Architectural Classification:** Commercial brick

**Material Notes**

**Description:** This one-story Commercial Brick auto showroom has a gabled roof, front parapet wall with stone finials and coping, decorative recessed panels in the front cornice, and a corbelled cornice. The storefront treatment is unusually exotic and includes rusticated masonry pilasters and doorway surround. It is a six-bay facade, with a center principal entrance for customer use, a ramped entry for repairs, a secondary service entrance, and oversized plate glass windows. The windows simultaneously serve to display cars to pedestrians/passing motorists, and to illuminate the vehicles for potential buyers. An adjoining storefront (for the sale of Fordson tractor equipment) was added to the west elevation in 1945 and remains in excellent condition. A three-bay garage was added on the east elevation in 1929, but has since been removed.

**Other Buildings/Features**

**Significant Persons:** Roy Dean, D. D. Harris

**Statement of Significance:** The Dean & Harris showroom was established in 1923 by Roy Dean and D.D. Harris. The first business owned by the partners was established in Webberville in 1915, but was moved to Lansing when the Ford Motor Company authorized establishment of a franchise there. Dean & Harris became one of the top dealerships in the Ford organization, and they operated at this location through the 1960s. This showroom represents the maturing auto distribution network of the 1920s.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1908-1963); Sanborn Fire Insurance maps (1934-1951).

**Surveyor's Comments:** Front showroom windows and garage doors enclosed ca. 1946.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 410 S Cedar

**ZipCode:** 48906

**Parcel Number:** 33-01-01-16-476-002

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Standard Oil Company bulk facility



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** CT/warehouse

**Current Use:** CT/office building

**OwnerType:** Private

**Photo**

**Filename:** CEDAR-S-410.TIF

**Roll:** 12

**Frame:** 7

**View:** NW

**Credit:** D Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:**

**Area of Significance:**

- 1 Commerce
- 2 Transportation
- 3

**Period of Significance:** 1917-1963

**Arch/Builder:**

**Date Built:** 1917

**Architectural Classification:** Commercial Brick

**Material Notes**

**Description:** This building is the last of several structures that once comprised a bulk loading complex. It represents three major episodes of construction. The existing two-bay service garage was constructed in 1917, a single-bay garage was added in 1923, and a large warehouse structure attached in 1935. The older sections of the building are one-story structures, with glazed face brick, tile coping, and some original steel sash windows. The two-story warehouse addition is a compatible brick structure, with no distinguishing features. Despite the recent conversion of two garage bays into office entries, the building retains a high level of physical integrity.

**Other Buildings/Features**

**Significant Persons:**

**Statement of Significance:** The Standard Oil Company has continuously occupied this site on S. Cedar since before 1892. Sanborn maps from 1906 indicate that a service station/livery was located at the north end of the parcel on Kalamazoo at that time, with storage tanks nearby (none of those early structures survive). The garages were probably designed to service the Standard Company trucks that were dispatched from this location for delivery of gas and oil. The complex was operated by Standard Oil through the 1960s.

**References:** City of Lansing Assessor's records; Lansing City Directories (1910-1963); Sanborn Fire Insurance maps (1892-1957).

**Surveyor's Comments:** Excellent condition.

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Wolverine/Cities Service Oil Company

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-09-452-031

**District Name:**

**Address:** 711 Center

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** CT/service station

**Current Usage:**

CT/office building

**Ownership:** Private

**Photo Information:**

**Roll** 5 **Frame:** 22

**View:** NW

**Filename:** CENTER-711A.TIF



**Survey Date:** 01/19/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1926

**Architect / Builder:**

**Description:** There are two single-story rectangular plan buildings on this site. A portion of the building pictured was originally a filling station; the other was a bulk depot structure. This building has a plain 5-bay facade with four windows and an off-center entrance and has been highly altered. Windows are not historic, vinyl siding has been applied, and building footprint has been expanded with an addition to the original south wall. It was renovated to serve as offices.

**Area of Significance:** Transportation Commerce

**Significance:** This is an example of a gasoline bulk plant facility or depot. Such wholesale distribution facilities were commonly found at the edges of cities and towns during the early 20th century, usually with a filling station adjacent. Trucks would come here to load and unload petroleum-based products such as oil, grease and gasoline, while the filling station served as a retail outlet. Occupied by the Wolverine Oil Company (1929), Cities Service (1933), Royer Oil Company (1963).

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1927-1963); Sanborn Fire Insurance maps (1934-1951).

**State of Michigan Historic Preservation Office**  
**Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Wolverine Oil Co.

**Area Map Title:**

**Common Name:** Cities Service Oil Company

**Parcel Number:** 33-01-01-09-452-031

**District Name:**

**Address:** 711 Center

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** CT/warehouse

**Current Usage:**

VACANT/NOT IN USE

**Ownership:** Private

**Photo Information:**

**Roll** 5 **Frame:** 21

**View:** SW

**Filename:** CENTER-711B.TIF



**Survey Date:** 01/19/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** S. Tillman/William Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1926

**Architect / Builder:**

**Description:** There are two single-story rectangular plan buildings on this site. This building was originally part of a bulk gasoline and oil depot facility which included storage tanks as well as a filling station. It is a simple shed-roofed frame structure. The building features a ramp at the front and an elevated loading dock to facilitate the delivery of goods. It is currently vacant.

**Area of Significance:** Transportation Commerce

**Significance:** This is an example of a gasoline bulk plant facility or depot. Such wholesale distribution facilities were commonly found at the edges of cities and towns during the early 20th century, usually with a filling station adjacent. Trucks would come here to load and unload petroleum-based products such as oil, grease and gasoline, while the filling station served as a retail outlet. Occupied by the Wolverine Oil Company (1929), Cities Service (1933), Royer Oil Company (1963).

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1927-1963); Sanborn Fire Insurance maps (1934-1951).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1213 Center

**ZipCode:** 48906

**Parcel Number:** 33-01-01-09-333-081

**City:** Lansing

**County:** Ingham

**Current Name:** Dard Incorporated

**Historic Name:** Raymond Chevrolet Sales



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** CT/auto showroom

**Current Use:** COMMERCE/TRADE

**OwnerType:** Private

**Photo**

**Filename:** CENTER-1213.TIF

**Roll:** 5

**Frame:** 25

**View:** SW

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Area of Significance:**

**Wall:** Brick

**Other:** Glass block

1 Commerce

2 Transportation

3

**Period of Significance:** 1924-1937

**Arch/Builder:**

**Date Built:** 1924

**Architectural Classification:** Commercial Brick

**Material Notes**

**Description:** This one-story commercial building is constructed of concrete block with brick veneer. Built in three phases, it has minimal decorative features. The original L-shaped salesroom (at the north end of the building, also used for tire and battery service) was completed in 1924. A rear addition was constructed in 1926, and in 1928 the building was expanded to the south for additional office space, resulting in the current rectangular building footprint. The four-bay salesroom area has a customer entrance and large center doorway opening that is flanked by large display windows; the large opening was designed for auto access. In 1948 the center doorway was enclosed with brick, and plate glass windows were replaced with glass block. On the south end, the 1928 office addition has a single off-center entry with transom. The door was originally flanked by large display windows. These openings were enclosed with brick and three single-pane windows in 1967. The building has a flat roof and full-width metal awning. The plain brick wall surface has raised brick pilasters separating the door and window bays, defining the cornice line.

**Other Buildings/Features**

**Significant Persons:**

**Statement of Significance:** Raymond Chevrolet occupied this site from 1925 until the mid-1930s, when it became Teeter Machine and Tool Company (1939), Lansing Heating and Ventilating Company (1945), and Dard Heating and Plumbing (1953). A fairly typical building of its type and era, it is one of a few still standing in Lansing that demonstrate the changing market demands in retail car sales before the widespread acceptance of large-lot suburban dealerships. Unusual for its location off a principal thoroughfare.

**References:** City of Lansing Assessor's records; Lansing City Directories (1921-1953).

**Surveyor's Comments:** Subtle differences in material and plan indicate the three distinct building episodes.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1204 N Genesee

**ZipCode:** 48915

**Parcel Number:** 33-01-01-17-204-110

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Elmer Dail House



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** D/single dwelling

**Current Use:** D/single dwelling

**OwnerType:** Private

**Photo**

**Filename:** GENESEE-N-1204.TIF

**Roll:** 7

**Frame:** 20

**View:** NE

**Credit:** D Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:** Stucco

**Area of Significance:**

- 1 Architecture
- 2 Industry
- 3

**Period of Significance:** 1922-1948

**Arch/Builder:**

**Date Built:** 1922

**Architectural Classification:** Colonial Revival

**Material Notes**

**Description:** An outstanding example of early 20th century eclectic revivals is the Dail house. A two-and-a-half-story brick veneer and stucco building, it has a symmetrical facade, with a center entry porch and a one-story porch wing on the side (east) elevation. Half-timber details located on the gable ends reference Tudor Revival, while the symmetrical facade, eyebrow dormer, and projecting dormers are typical of the side-gabled Colonial type. The significance of the automobile is confirmed by the two-car attached garage.

**Other Buildings/Features**

**Significant Persons:** Elmer Dail

**Statement of Significance:** Located in the fashionable Westmoreland neighborhood, the house was built for Elmer Dail in 1922. Trained as a civil engineer, Dail worked briefly for the Gier & Dail Manufacturing Company before becoming manager of the Jarvis Engine & Machine Works in 1915. Derived from the Lansing Iron & Engine Works, one of Lansing's more prominent steam engine manufacturers, Jarvis was founded in 1893 and specialized in steam engine and boiler work, in addition to a general machine shop business. The company abandoned engine manufacture in the 1920s in favor of more lucrative prospects in structural steel fabrication. In partnership with E. Clement Jarvis, Dail purchased a major interest in the Flint Structural Steel Company in 1930, and a few years later they obtained controlling interest. From this, the Jarvis-Flint Erection Company was founded, completing some of the largest construction projects in downtown Lansing. Dail occupied this home through the late 1940s.

**References:** Capital Area District Library, Local History Collection; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1921-1953).

**Surveyor's Comments:** Excellent integrity, neighborhood district potential.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1306 N Genesee

**ZipCode:** 48915

**Parcel Number:** 33-01-01-17-202-161

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Ernest Dail House



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** D/single dwelling

**Current Use:** D/single dwelling

**OwnerType:** Private

**Photo**

**Filename:** GENESEE-N-1306.TIF

**Roll:** 7

**Frame:** 21

**View:** NW

**Credit:** D Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Area of Significance:**

1 Architecture

2 Industry

3

**Wall:** Stone

**Other:**

**Period of Significance:** 1921-1949

**Arch/Builder:**

**Date Built:** 1921

**Architectural Classification:** Arts and Crafts

**Material Notes**

**Description:** In Lansing, a textbook example of a high-style English Cottage is the residence of Ernest Dail (1306 N. Genesee). Constructed in 1921, it is among the oldest homes in the Westmoreland neighborhood. Visually arresting for its numerous fairy-tale qualities, it is an L-shaped wood frame building with coursed rubble stone walls. The roof has rolled eaves and eyebrow dormers, and has decorative wood braces beneath the eaves. An oversized stone chimney with terra-cotta flues is located at the inside juncture of the two intersecting wings. The front gable is dominated by a two-story arched opening that contains five small-paned casement windows at each level; the spandrel that separates the windows is half-timbered, with a pebble-dash wall finish. There is a small arched window in the gable end, and the doorway beside it has a braced, arched hood above the main (south) entrance. The house originally had a cedar shake roof (since replaced with asphalt shingle), and in 1950 the kitchen and bathroom were remodeled. The house is otherwise intact, and is an outstanding and rare example of its kind in Lansing.

**Other Buildings/Features:** Detached two-car garage

**Significant Persons:** Ernest Dail

**Statement of Significance:** Built in 1921, the home was owned and occupied for over twenty years by Ernest Dail, president of the Dail Steel Products company. A job-shop stamping plant, the company was founded in 1911 and reorganized in 1913 by his father, Ernest I. Dail. The company produced stampings for the automotive, agriculture and home appliance industries through the 1960s. Dail lived in this home until ca. 1940. His wife remained in the home until ca. 1950, when she remarried. The house is located about a block west of brother Elmer Dail's home at 1204 N. Genesee. It is an exuberant expression of the English Cottage style, designed to attract attention to the taste and wealth of its owner, typical of the emerging Lansing automobile magnates in the early 20th century.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1921-1953).

**Surveyor's Comments:** Excellent integrity, neighborhood district potential.

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** NR Listed

**USGS Map Title:** Lansing South

**Historic Name:** Lansing Commercial Body Company

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-09-401-101

**District Name:**

**Address:** 116 E Grand River

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** IPE/factory

**Current Usage:**

CT/office

**Ownership:** Private

**Photo Information:**

**Roll** 7 **Frame:** 7

**View:** S

**Filename:** GRANDRIVER-E-116.TIF



**Survey Date:** 02/08/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1910

**Architect / Builder:**

**Description:** This is a simple, single-story building with rusticated block walls, stone windows sills and headers, and very little architectural detail. At the rear is a workshop/manufacturing area (1890), and in front is a 1910 addition (largely obscuring the back wing). The whole is L-shaped with a flat roof. It has a small entry door offset to one side, and double-hung windows of varying sizes across the front and side elevation. There is a single bay garage door on the side (west) wall.

**Area of Significance:** Industry Commerce

**Significance:** A small manufacturing facility, this building was occupied by M.D. Rork Manufacturing Company (specializing in windmill repairs, 1913-24) and a series of small woodworking, repair, roofing, insulating and tool and die jobbers in the first half of the twentieth century. In 1924 it was occupied by the Commercial Body Company, a short-lived maker of truck bodies. Located directly across the street from the Auto Body Company, the building represents the small-scale industries serving the auto industry in the early twentieth century. This building is part

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1890-1953).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Bates-Wohlert Company

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-10-301-013

**District Name:**

**Address:** 708 E Grand River

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** IPE/machine shop

**Current Usage:**

IPE/machine shop

**Ownership:** Private

**Photo Information:**

**Roll** 7 **Frame:** 15

**View:** SE

**Filename:** GRANDRIVER-E-708.TIF



**Survey Date:** 02/08/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1908; 1919

**Architect / Builder:**

**Description:** This is a single story, rectangular plan office building, part of a larger industrial complex. The façade has a simulated masonry veneer. Portions of the complex date back to 1908 and 1919, but most of the factory complex dates to World War II and later. Other buildings on this site are constructed of masonry, steel and glass and have been altered.

**Area of Significance:** Industry

**Significance:** Wohlert Corporation is the largest independent supplier of ring gears in the U.S. Headquartered in Lansing, they have been supplying ring gears and other parts to the automobile industry for over 100 years. The Bates Tractor Company appears at this location in the 1913 city directory, continuing until 1924. The site was then occupied by Bates & Wohlert (1929), and Wohlert Corporation (1933). Wohlert Corporation still uses the facility.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1898-1953); Sanborn Fire Insurance maps (1913-1951).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1223 E Grand River  
**City:** Lansing **County:** Ingham  
**Current Name:** Heavy D Auto Repair  
**Historic Name:** Capitol Heights Filling Station

**ZipCode:** 48906 **Parcel Number:** 33-01-01-10-181-261



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** CT/service station  
**Current Use:** CT/auto repair garage  
**OwnerType:** Private

**Photo**

**Filename:** GRANDRIVER-E-1223.TIF  
**Roll:** 6 **Frame:** 21  
**View:** N  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete **Roof:** Asphalt  
**Wall:** Brick **Other:** Concrete: block  
Wood: plywood

**Area of Significance:**

- 1 Commerce
- 2 Transportation
- 3

**Period of Significance:** 1923-1963

**Arch/Builder:**

**Date Built:** 1923

**Architectural Classification:** Not Applicable

**Material Notes**

**Description:** The Capitol Heights Filling Station was originally a small, square building with a hipped roof and canopy extending off the front wall to the pump island. A two-bay service wing was added in 1947 and the original projecting canopy was removed 1949. It is a brick veneer building with a concrete block bay wing.

**Other Buildings/Features:**

**Significant Persons:**

**Statement of Significance:** The Capitol Heights station was constructed in 1923 by John Angal, who operated the station until ca. 1937. Angal also owned a hardware store on the adjoining lot. It was subsequently operated by E. Lee Brown (1939), Clarence Edick (1945), Everett O. Luke (1953), and in 1963 it became the Post Spartan Service Station. The addition of a service bay to a single-purpose filling station marks a major change in the architectural program of retail gasoline sales.

**References:** Capital Area District Library, Local History Collection; City of Lansing Assessor's records; Lansing City Directories (1921-1963).

**Surveyor's Comments:**

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 127 W Grand River  
**City:** Lansing **County:** Ingham  
**Current Name:**  
**Historic Name:** Pulver Brothers Filling Station

**ZipCode:** 48906 **Parcel Number:** 33-01-01-09-331-001



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** CT/service station  
**Current Use:** VACANT/NOT IN USE  
**OwnerType:** Private

**Photo**

**Filename:** GRANDRIVER-W-127.TIF  
**Roll:** 6 **Frame:** 22  
**View:** E  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete **Roof:** Asphalt  
**Wall:** Brick **Other:**

**Area of Significance:**

- 1 Commerce
- 2 Transportation
- 3

**Period of Significance:** 1925-1963

**Arch/Builder:**

**Date Built:** 1925

**Architectural Classification:** Not Applicable

**Material Notes**

**Description:** The Pulver Brothers Filling Station sold Sinclair products to Lansing motorists. It has no provisions for service facilities, but it does have an integral canopy that extends out to the pump island. Constructed of brick and featuring small windows and a hipped roof, this structure is situated diagonally on the corner lot, resulting in equal exposure on the two main streets of W. Grand River and Capitol Avenue.

**Other Buildings/Features:**

**Significant Persons:**

**Statement of Significance:** This gasoline station was owned and operated by the Pulver Brothers from 1925-c. 1937. It was then owned by G. H. Sweazey (1939), Lawrence Hengesbaugh (1945), and Herb Brossard (1953).

**References:** Capital Area District Library, Local History Collection; City of Lansing Assessor's records; Lansing City Directories (1908-1953).

**Surveyor's Comments:** Poor condition.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 533 S Grand

**ZipCode:** 48933

**Parcel Number:** 33-01-01-16-456-021

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** James Seager House



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** D/single dwelling

**Current Use:** CT/office building

**OwnerType:** Private

**Photo**

**Filename:** GRAND-S-533.TIF

**Roll:** 12

**Frame:** 4

**View:** NE

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Stone

**Roof:** Asphalt

**Wall:** Brick

**Other:** Wood

**Area of Significance:**

- 1 Architecture
- 2 Industry
- 3

**Period of Significance:** 1906-1930

**Arch/Builder:**

**Date Built:** 1877

**Architectural Classification:** Gabled Ell, Italianate

**Material Notes**

**Description:** Seager's two-story brick house is a Gabled Ell that features elaborate Italianate details, including a bracketed cornice, wide overhanging eaves, segmental-arched stone hoodmolds with incised decorations, and a two-story bay window. It features a full-width wood porch on the front-facing gable that was reconstructed in 1999 to closely duplicate an original porch that was removed in the 1940s. The whole sits on a handsome multi-colored stone foundation.

**Other Buildings/Features**

**Significant Persons:** James Seager

**Statement of Significance:** This was the home of James Seager, a copper magnate and steam engine manufacturer. Originally built in 1877 for Alvin Whitehead, one of Lansing's early merchants, it was occupied by Seager from around 1904 to 1930. A native of New York, Seager attended Michigan Agricultural College in 1863-64, and served as paymaster's clerk during the Civil War. After the war, he became a bank cashier in Kansas, and in 1870 was involved in the construction of the Arkansas Central Railroad. Returning to Michigan in 1871, he established a general store in Houghton and was president of the National Bank there. During the 1870s he served as president of the Copper Range Railroad, and president of the Portage Lake Foundry & Machine Company. He was also involved in the Copper Range Mining Company and Baltic Mining Company, and helped develop the mining industry of the Upper Peninsula. Around 1902 Seager came to Lansing, where he worked as general manager of Olds Gasoline Engine Works. He subsequently became president of the Seager Engine Works, successor in 1903 to the Olds company, where he also served on the board of directors. By 1910 it was the largest of seven gasoline engine manufacturers in the city. He retired in 1915, and lived in this home until c. 1930.

**References:**

Capital Area District Library, Local History Collection; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); A Most Unique Machine (May, 1975); Lansing City Directories (1883-1953).

**Surveyor's Comments:**

**State of Michigan Historic Preservation Office**  
**Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible  
**Historic Name:** Duplex Truck Company

**USGS Map Title:**

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-22-151-003

**District Name:**

**Address:** 732 E Hazel

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** IPE/automobile factory

**Current Usage:**

INDUSTRY/PROCESSING/EXTRACTING

**Ownership:** Private

**Photo Information:**

**Roll** 1 **Frame:** 20

**View:** SW

**Filename:** HAZEL-E-732.TIF



**Survey Date:** **Surveyor:** M. Johnson

**Record Date:** **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1915-1963

**Architect / Builder:**

**Description:** This is a large, multi-component industrial complex. Its primary structure is a long, low brick building with an undulating roof resembling several contiguous airplane hangars. The complex consists of about 20 industrial buildings, some constructed as early as 1915, but most primarily dating from the 1920s through World War II.

**Area of Significance:** Industry

**Significance:** Duplex Truck Company originated in Charlotte, MI around 1909, operating as the Duplex Power Car Company. In 1916 they moved to Lansing, erecting a factory at 2100 S. Washington. By 1924 Duplex relocated its operations here, originally leasing this site once occupied by the Lansing Foundry Company. In 1938 Duplex bought the property and maintained ownership up through 1953, continuing as the Duplex Division of Warner & Swasey Company in 1963. Duplex was one of the world's first heavy-duty truck manufacturers.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1908-1963); Michigan Roads and Pavements (Vol. XXII, 1/1/25) Sanborn Fire Insurance maps (1934-1951).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 326 S Hosmer

**ZipCode:** 48912

**Parcel Number:** 33-01-01-15-309-102

**City:** Lansing **County:** Ingham

**Current Name:** Industrial Pattern of Lansing

**Historic Name:** Lansing Motor & Pump Company

**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**



**Resources on Property/Status**

**Historic Use:** IPE/manufacturing facility

**Current Use:** IPE/manufacturing facility

**OwnerType:** Private

**Photo**

**Filename:** HOSMER-S-326.TIF

**Roll:** 1

**Frame:** 23

**View:** NW

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Area of Significance:**

1 Industry

2 Architecture

3

**Wall:** Brick

**Other:**

**Period of Significance:** 1905-1963

**Arch/Builder:**

**Date Built:** 1905

**Architectural Classification:** Production Shed

**Material Notes**

**Description:** Established and built in 1905, this is a simple one-story brick production shed of standard mill construction. It has a low-pitched gable roof and segmental-arched windows. A large machine shop was added in 1927 to the rear of the building, but was removed c. 1976.

**Other Buildings/Features:**

**Significant Persons:** John H. Ebel

**Statement of Significance:** The Lansing Motor & Pump Company was established in 1905 by John Ebel. Ebel was born in Henry County (OH) in 1869. In 1882 his family relocated to Grand Ledge (MI), where his father farmed. Until the age of 24 Ebel worked on the farm, as well as with the Holliday Windmill & Pump Company. In 1890 he became a salesman for the Maud S. Windmill & Pump Company of Lansing, and in 1901 he started his own business. His son, Luewelson, served as vice-president and superintendent of the company, which manufactured pumps and gasoline engines. In the mid-twenties, the company was renamed Ebel Hoist & Pump Company. Later occupants included Superior Brass & Aluminum Castings (1945-53) and Industrial Patterns (1963). The building is a unique intact example of a one-story brick production shed factory of standard mill construction, and as an engine manufacturer is closely associated with the early auto-related industry.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1898-1963); Sanborn Fire Insurance maps (1913-1951).

**Surveyor's Comments:** Earliest factory building identified in survey specifically built for auto-related manufacturing.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 506 S Hosmer

**ZipCode:** 48912

**Parcel Number:** 33-01-01-15-351-051

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Michigan Screw Company



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/foundry

**Current Use:** VACANT/NOT IN USE

**OwnerType:** Private

**Photo**

**Filename:** HOSMER-S-506.TIF

**Roll:** 9

**Frame:** 11

**View:** S

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:** Stucco

**Area of Significance:**

1 Industry

2

3

**Period of Significance:** 1916-1932

**Arch/Builder:**

**Date Built:** 1916

**Architectural Classification:** Industrial Loft

**Material Notes**

**Description:** This is a steel-framed brick and concrete building. It is L-shaped, with two-story offices in the north end, a two-story production area in the center of the building, and one-story storage/loading at the south end of the L. A shed-roofed lean-to is attached at the south end. Architectural details are primarily confined to the office area, which has a variegated brick wall finish with raised pilasters and corner piers, concrete belt course and water table, and geometric brick patterning. Windows in this area are steel sash, and are grouped in twos and threes. The main office entry is located on the street elevation; it has a plain, monumental concrete surround. The decorative treatment in the factory section is more restrained. It has plain brick walls and a corbelled cornice, with window bays separated by raised pilasters. Large window openings have been enclosed. The four-bay warehouse area has a flush brick wall surface and cast stone window sills. The building sits on a sloped lot and has a full basement, with window exposure on the street elevation and overhead garage doors for delivery on the downhill (west) rear elevation.

**Other Buildings/Features**

**Significant Persons:** R.E. Olds, Ray Potter, Hugo Lundberg

**Statment of Significance:** The Michigan Screw Company was one of three subsidiary businesses (along with Atlas Drop Forge and National Coil) created by R.E. Olds in support of the Reo Motor Car Company, which claimed in 1906 to be the largest automobile factory in the world. Michigan Screw was organized that year for the manufacture of precision parts for the automobile and gas engine industries. The first officers of the company were R.E. Olds (president), R.H. Scott (vice-president), M.R. Potter (secretary and treasurer) and Hugo Lundberg (chief mechanic, later general manager). With an employee force of twenty, the company began operations at this location, using buildings previously occupied by the W.S. Olds Air Cool Motor Company. A foundry operation known as Capital Castings was also located on the adjoining lot. By 1916 -- and with a workforce of 400 -- Michigan Screw had grown to be one of the largest manufacturers of its kind in the country. The current building was constructed that year, replacing the old factory complex with a structure that offered 100,000 square feet of factory floor space under a single roof. Newspaper accounts described the building at that time as "a large structure of steel, concrete and white brick [that] will add greatly to the already large capacity of the plant." In 1929 the Michigan Screw Company merged with Federal Screw Works, but by 1932 the plant was closed. From that time through the 1960s the building was occupied by the State Liquor Control Commission.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1898-1963); Sanborn Fire Insurance maps (1906-1951).

**Surveyor's Comments:** Currently vacant.

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:**

**Historic Name:** Dail Steel Company

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-22-103-021

**District Name:**

**Address:** 1000 S Hosmer

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** IPE/stamp mill

**Current Usage:**

INDUSTRY/PROCESSING/EXTRACTING

**Ownership:** Private

**Photo Information:**

**Roll** 9 **Frame:** 12

**View:** NW

**Filename:** HOSMER-S-1000.TIF



**Survey Date:** **Surveyor:** M. Johnson

**Record Date:** **Recorder:** D. Hershberger/W. Rutter

**NR:** **SR:** **NHL:** **CF:** **36 CFR 61:**  **ER Project Number:**

**Date of Construction:** 1915

**Architect / Builder:**

**Description:** This industrial assemblage consists of several rectangular plan buildings. Beginning with the two-story factory building at the core of the complex (1900), there were four one-story additions constructed in 1917, 1918, 1944, 1947, and 1950. The original building is brick construction, with the remainder primarily steel frame. Most of the complex has been sheathed with metal siding, and only a small portion of the original brick construction visible on the south elevation. There is minimal fenestration on all of the structures.

**Area of Significance:** Industry

**Significance:** The core building was occupied by Gifford Engine Company in 1913. After the Gier and Dail Manufacturing Company (founded 1903) dissolved in 1913, and Geir moved his operation to N. Larch (later to become part of Motor Wheel), this site became the location of Dail Steel Products Company, a metal specialties manufacturer which produced stampings for the automotive, agricultural and home appliance industries.. The Dail company occupied this location through c. 1960.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1900-1924); Sanborn Fire Insurance maps (1913-1951).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1701 Jerome  
**City:** Lansing                      **County:** Ingham  
**Current Name:**  
**Historic Name:** Hugo Lundberg House

**ZipCode:** 48912                      **Parcel Number:** 33-01-01-15-276-081



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** D/single dwelling  
**Current Use:** D/single dwelling  
**OwnerType:** Private

**Photo**

**Filename:** JEROME-1701.TIF  
**Roll:** 9                                      **Frame:** 6  
**View:** NE  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete                      **Roof:** Tile  
**Wall:** Brick                                      **Other:** Wood

**Area of Significance:**

- 1 Architecture
- 2 Industry
- 3

**Period of Significance:** 1918-1967

**Arch/Builder:**                                      **Date Built:** 1918

**Architectural Classification:** American Foursquare

**Material Notes**

**Description:** This is one of the most common vernacular versions of the Foursquare type. Sometimes known as the Prairie Box, it is a two-story, orange brick veneer building with a simple square plan, low-pitched hipped roof, and symmetrical facade. It has a full-width, hipped front porch supported by large brick corner piers. The roof is covered with red clay tile and it has four hipped dormers, referencing both Prairie and Mission styling. On the rear (north) elevation is an attached garage and sleeping porch.

**Other Buildings/Features**

**Significant Persons:** Hugo Lundberg

**Statement of Significance:** This house was built and occupied by Hugo Lundberg. Lundberg came to Lansing in 1906 and, with R.E. Olds, Richard Scott, and Ray Potter, helped organize the Michigan Screw Company, manufacturers of precision parts for the automobile and gas engine industries. He served as president and general manager of the company, but in 1927 the Michigan Screw Company was sold to Federal Screw. Lundberg was then briefly involved with the Driggs Aircraft Corporation, a short-lived Lansing venture in airplane manufacture that ended with the stock market crash in 1929. In 1933 he founded the Lundberg Screw Company. A local civic and business leader, Lundberg spent most of his productive years in this home, where he lived until the time of his death in 1967.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1918-1963); Sanborn Fire Insurance map (1926).

**Surveyor's Comments:** Integrity of building is excellent.

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Thomas Harris House

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-15-280-241

**District Name:**

**Address:** 1712 Jerome

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** D/single dwelling

**Current Usage:**

D/single dwelling

**Ownership:** Private

**Photo Information:**

**Roll** 9 **Frame:** 8

**View:** S

**Filename:** JEROME-1712.TIF



**Survey Date:** 02/09/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**NR:** **SR:** **NHL:** **CF:** **36 CFR 61:**  **ER Project Number:**

**Date of Construction:** 1924

**Architect / Builder:**

**Description:** This is a two-story, rectangular plan, Dutch Colonial style wood frame house with a full-width shed dormer and double-hung, shuttered windows. A prominent brick chimney distinguishes the building's west elevation. This house is reminiscent of the many catalog homes that were available for purchase in the 1920s. Although sheathed in aluminum siding, the historic integrity of the building has not been significantly impacted.

**Area of Significance:** Architecture Industry

**Significance:** Harris Thomas was an attorney with diverse business holdings in Lansing. A founder of the Lansing Spoke Company in the 1890s, he later played a leading role in the founding of the Auto Body Company in 1901. In 1925 he was Vice President of the Auto Body and New Way companies. Thomas lived in the house from its construction (1924) until the late 1930s. Subsequent owners were: Deane Mitchell (1930s); Maxwell Thompson (1945); and Francis Bleicher (1953 - 1960s).

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1918-1963).

**State of Michigan Historic Preservation Office**  
**Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Whitely Peerless Sales

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-15-307-002

**District Name:**

**Address:** 731 E Kalamazoo

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto showroom

**Current Usage:**

CT/auto repair garage

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 11

**View:** NE

**Filename:** KALAMAZOO-E-731.TIF



**Survey Date:** 02/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1928

**Architect / Builder:**

**Description:** This masonry commercial building is distinguished by its broad, shallow-pitch, arched roof that resembles an airplane hangar. The facade has been altered but retains a masonry pillar at each corner. A large service bay door and pedestrian entrance pierce the facade, and the other elevations virtually lack fenestration. An unusual aspect is that the building has been constructed partially into an earthen slope on the east elevation.

**Area of Significance:** Commerce Transportation

**Significance:** Peerless is a non-surviving marque, an automobile brand that did not survive the Depression. After a brief period as an automobile sales showroom, this building has served variously as an auto body shop, transmission repair shop, garage, and warehouse. Whitely Peerless Sales occupied the building from 1929 until the late 1930s, when it housed the P. Crosius Garage. In 1945 the building was occupied by Capitol Manufacturing Company (machinists), but the building is listed as vacant in the 1953 and 1963 City Directories.

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1918-1963).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Kramer Company

**Area Map Title:**

**Common Name:** C & T Body Shop

**Parcel Number:** 33-01-01-15-352-002

**District Name:**

**Address:** 800 E Kalamazoo

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto parts sales

**Current Usage:**

CT/auto repair garage

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 9

**View:** S

**Filename:** KALAMAZOO-E-800.TIF



**Survey Date:** 01/12/03

**Surveyor:** M. Johnson

**Record Date:** 04/12/03

**Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:**

**SR:**

**NHL:**

**CF:**

**ER Project Number:**

**Date of Construction:** 1929

**Architect / Builder:**

**Description:** This is a simple, rectangular concrete block building, now sheathed in synthetic siding. The roof slopes slightly to the rear, as indicated by the stepped parapets on the side elevations. There are garage bay doors on the front and side elevations. There is also a pedestrian door and four replacement windows on the façade. The building was most recently altered in the 1980s, when a large addition was constructed on the building's rear elevation.

**Area of Significance:** Commerce

Transportation

**Significance:** This building served a variety of automotive-related functions, including auto parts store, machine shop, and body shop. Although the Kramer Company (auto parts and tires) is recorded by City Directories at this location as early as 1924, most city records record the current building's construction date as 1929. By 1939 the building housed Kramer Auto Parts, a business which continued to occupy the building up into the 1970s. It still serves an auto-related function as a portion of a body shop, a business located in an automobile repair row east of

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1924-1963).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Liberty Garage

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-15-352-342

**District Name:**

**Address:** 810 E Kalamazoo

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto repair garage

**Current Usage:**

CT/auto repair garage

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 5

**View:** SW

**Filename:** KALAMAZOO-E-810.TIF



**Survey Date:** 01/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1920

**Architect / Builder:**

**Description:** This is a rusticated concrete block garage building with low parapet wall and gabled roof. Several windows on the side elevation have experienced complete infill. The facade consists of two large vehicular doors and an infilled window. The side elevations formerly were pierced by several windows before they were all removed and sealed. A central monitor unit has been removed from the roof, and a side (west) addition was constructed ca. 1948.

**Area of Significance:** Industry

**Significance:** The building was constructed ca. 1920. It was first known as the Kramer Company Garage. Later occupied by the Barney Smith & Company Garage (1924), Liberty Garage (1929), and John Reston & Ernest Martin Garage (1939). The current occupant, C & T Body Shop and Auto Sales, has been at this location since ca. 1953, a business located within an automobile repair row east of downtown.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1918-1963).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Root's Garage

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-15-352-331

**District Name:**

**Address:** 812 E Kalamazoo

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto repair garage

**Current Usage:**

CT/auto repair garage

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 6

**View:** S

**Filename:** KALAMAZOO-E-812.TIF



**Survey Date:** 01/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1929

**Architect / Builder:**

**Description:** This is a rectangular plan concrete block building with a flat roof. The facade consists of two vehicular entrance bays and a pedestrian entrance door. The side elevations are functional and consist of steel frame window units.

**Area of Significance:** Commerce Transportation

**Significance:** This building served Lansing as an automobile service garage since its construction during the 1920s, one of many that sprung up in the city to cater to the rapidly expanding numbers of automobiles. Originally one of the businesses located within an automobile repair row east of downtown, it still serves in an auto-related capacity.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1918-1963).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Square Deal Auto Body Co.

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-15-352-302

**District Name:**

**Address:** 826 E Kalamazoo

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto repair garage

**Current Usage:**

Storage?

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 7

**View:** SE

**Filename:** KALAMAZOO-E-826.TIF



**Survey Date:** 01/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1928

**Architect / Builder:**

**Description:** This is a rectangular plan, concrete block building with a brick facade. Its roof slopes to the rear between stepped parapets on the side elevations. The street elevation consists of three service bay doors: the two flanking doors are 15-panel/9-light, wood overhead garage doors with exhaust ports; the center bay door is a newer, metal construction, overhead door with six small windows.

**Area of Significance:** Industry

**Significance:** This building was erected in the 1920s as an automobile service garage, in response to the increasing numbers of automobiles on Lansing streets. In 1928, this building was occupied by Square Deal Auto Body, in 1933 by Triangle Body Repair, in 1939 by City Body Shop, and by 1953 through at least 1963, Morrie's Auto Body Parts. It is located at the eastern end of an automobile repair row located east of downtown Lansing.

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1924-1963).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Fleming Auto Sales

**Area Map Title:**

**Common Name:** Action Discount Jewelry Brokers

**Parcel Number:** 33-01-01-16-277-152

**District Name:**

**Address:** 112 N Larch

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/store

**Current Usage:**

CT/store

**Ownership:** Private

**Photo Information:**

**Roll** 3 **Frame:** 20

**View:** SE

**Filename:** LARCH-N-112.TIF



**Survey Date:** 01/18/03

**Surveyor:** M. Johnson

**Record Date:** 04/12/03

**Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:**

**SR:**

**NHL:**

**CF:**

**ER Project Number:**

**Date of Construction:** 1920

**Architect / Builder:**

**Description:** This is a two-story, brick commercial building with a flat roof. The four bay symmetrical second story is supported by four pillars dividing display windows and an off-center entrance. Synthetic siding covers the area between the first and second stories, and the original second floor windows have been replaced with a fixed-pane window. Numerous windows on the side of the building have been infilled with brick.

**Area of Significance:** Commerce

Transportation

**Significance:** This building was erected as an automobile sales dealership as the influence of the automobile increased during the first decades of the 20th century. It initially housed Fleming Motor Sales, but by the early 1920s was occupied by Wolverine Auto Sales; in 1924 by State Auto Sales. In 1929 its use shifted to non-automotive products with ABC Sales and Service providing washing machine sales and repairs. By 1933 was converted into a warehouse for D & C Storage Company, which occupied the building up through the 1960s.

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1918-1963); Sanborn Fire Insurance maps (1934-1951).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Forncrook Automotive Supply Co.

**Area Map Title:**

**Common Name:** Abrams Aerial Survey Co.

**Parcel Number:**

**District Name:**

**Address:** 124 N Larch

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/store

**Current Usage:**

CT/office building

**Ownership:** Private

**Photo Information:**

**Roll** 3 **Frame:** 19

**View:** NE

**Filename:** LARCH-N-124.TIF



**Survey Date:** 01/18/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**NR:** **SR:** **NHL:** **CF:** **36 CFR 61:**  **ER Project Number:**

**Date of Construction:** 1928

**Architect / Builder:**

**Description:** This two-story brick-front commercial building has a flat roof and stepped parapet with Art Deco style finials and pilasters. The building is virtually devoid of windows, but there is a main entry door centered on the front façade. A single story building with glass block and masonry flanked by peripheral entry doors has been added to the south of the original structure. Original showroom display windows have been infilled with brick and a small section of glass block.

**Area of Significance:** Commerce Engineering

**Significance:** The Forncrook Automotive Supply Company occupied this building in 1929. It was vacant during the Depression, but by 1939 housed the Michigan State Unemployment Agency. Abrams Aerial Photography Company acquired the building c. 1950 and continues to occupy it today. The Abrams Company was started in 1923 at another location. Abrams introduced aerial surveys to Michigan's highway department for route location and engineering in the 1920s, the first application of its kind in the nation.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1918-1963); Sanborn Fire Insurance maps (1934-1951).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Bannasch Building

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-16-277-123

**District Name:**

**Address:** 130 N Larch

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto repair garage

**Current Usage:**

CT/warehouse

**Ownership:** Private

**Photo Information:**

**Roll** 3 **Frame:** 22

**View:** SE

**Filename:** LARCH-N-130.TIF



**Survey Date:** 01/18/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**NR:** **SR:** **NHL:** **CF:** **36 CFR 61:**  **ER Project Number:**

**Date of Construction:** 1927

**Architect / Builder:**

**Description:** This is a two story masonry building. Its facade is topped by a stepped parapet, and its fenestration originally consisted of four symmetrical second story window bays over a first story composed of an off-center entrance flanked by large display windows/vehicular entrances. All of the fenestration has been filled in with glass or concrete block.

**Area of Significance:** Industry

**Significance:** Rudolf Bannasch started a blacksmithing business in the rear of this building in 1916, and expanded into automobile body bumping and painting. By 1927, he built the current masonry structure, but unable to maintain profitable with this new building because of the depression, he moved his business in 1935. In the late 1930s the building housed Rhynard's "24-Hour Service" garage, and then, from 1945 through 1969, the Paramount Coffee Co.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1918-1963); Sanborn Fire Insurance maps (1934-1951).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 401 N Larch  
**City:** Lansing **County:** Ingham  
**Current Name:** Henry's Carburator & Electric  
**Historic Name:** Roxanna Gas Station

**ZipCode:** 48912 **Parcel Number:** 33-01-01-16-228-191



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** CT/service station  
**Current Use:** CT/auto repair garage  
**OwnerType:** Private

**Photo**

**Filename:** LARCH-N-401.TIF  
**Roll:** 13 **Frame:** 21  
**View:** NW  
**Credit:** M. Johnson  
**Caption:**

**Main Building**

**Foundation:** Concrete **Roof:** Asphalt  
**Wall:** Brick **Other:**

**Area of Significance:**

- 1 Commerce
- 2 Transportation
- 3

**Period of Significance:** 1928-1963

**Arch/Builder:** **Date Built:** 1928

**Architectural Classification:** Hipped with canopy

**Material Notes**

**Description:** This building is comprised of two distinct parts that illustrate evolving service functions in the retail gasoline industry in the 1920s and 40s. The original structure, built in 1928, is a small brick veneer filling station. The attached garage wing was added in 1945. The filling station has a three-bay facade and brick veneer walls. It sits diagonally on a corner lot at Larch and Shiawassee. The building is currently front-gabled, but it was originally hipped with a projecting canopy. The canopy was removed in 1945 when the side service wing was added. The filling station has a centered front entry flanked by double-hung windows; the transom light above the door has been enclosed. On the side (east) wall is a large multi-light, metal sash casement window. The two-bay service wing is constructed of concrete block and is located at the northeast corner of the filling station. It has a flat roof and rectangular footprint, and it sits parallel to Larch Street.

**Other Buildings/Features**

**Significant Persons:**

**Statement of Significance:** This filling station was built in 1928 by the Roxanna Company, a regional distributor of Shell Oil products. It subsequently became branded as a Shell station (1933), and was operated by J.R. Blankenship (1939), Clarence Eytcheson (1945), and Henry Hinkel (1953). By 1963 the station was converted exclusively to a repair shop, and was known as Henry's Carburator & Electric Service.

**References:** City of Lansing Assessor's records; Lansing City Directories (1921-1963); Sanborn Fire Insurance maps (1934-1951).

**Surveyor's Comments:** Transitional style with alterations typical of changes in retail market.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1508 N Larch

**ZipCode:** 48906

**Parcel Number:** 33-01-01-10-105-001

**City:** Lansing

**County:** Ingham

**Current Name:** Motor Wheel Corporation

**Historic Name:** Gier Pressed Steel



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/industrial complex

**Current Use:** IPE/industrial complex

**OwnerType:** Private

**Photo**

**Filename:** LARCH-N-1508.TIF

**Roll:** 4

**Frame:** 13

**View:** NW

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Area of Significance:**

1 Industry

2

3

**Wall:** Brick

**Other:** Metal: Steel

**Period of Significance:** 1916-1930

**Arch/Builder:**

**Date Built:** 1916

**Architectural Classification:** Industrial loft

**Material Notes**

**Description:** Beginning in 1916 as a four-building complex, the Gier plant was rapidly enlarged after its merger with Motor Wheel in 1920, and the original factories and office building were soon consumed by the growth. However the power plant and adjoining engine room on the east side of the site remain largely untouched. The Gier powerhouse is located in a freestanding two-part facility. The boiler room is a stepped production shed, with triple steel sash monitor windows and pilaster type brick walls. The boiler room was built in several phases, beginning with the core structure in 1923, which has exposed steel roof trusses, reinforced concrete floors and roof, and salt-glaze brick interior wall finish. Connected to the boiler room on the north is the engine room, which was built in 1923. The main mass has a reinforced concrete floor and roof, steel truss floor framing, steel sash windows, with tile and fire-glazed brick walls. Next to the boiler room, the coal stack bearing the Gier name is still clearly visible.

**Other Buildings/Features:** Multiple functional buildings, now under a single roof and nearly indistinguishable.

**Significant Persons:** B. S. Gier, Harry Harper, W. K. Prudden

**Statement of Significance:** Incorporated in 1915 by Burton S. Gier, Gier Pressed Steel specialized in a general line of stamping and pressed steel work -- ranging from kitchen utensils to auto bodies -- with a principle focus on automobile wheel components. In 1916, the Gier plant was constructed. In 1920 the company was merged with Prudden Wheel, Auto Wheel and Weis & Lesh to form the Motor Wheel Corporation, becoming the world's largest producer of wood and steel wheels. Production was centered at the Gier plant. Gier was vice-president and treasurer of Motor Wheel until his retirement and death in 1928, upon which the Gier name gradually disappeared. In 1996, the Motor Wheel Corporation left Lansing and was merged with Hayes Wheels International.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records;

33-01-01-10-105-001

Page 1 of 2

Historic Michigan (Fuller, 1924); Lansing City Directories (1904-1963); Sanborn Fire Insurance maps (1892-1951).

**Surveyor's Comments:**

**State of Michigan Historic Preservation Office**  
**Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Federal Drop Forge

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-29-426-151

**District Name:**

**Address:** 2807 S Martin Luther King

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** IPE/foundry

**Current Usage:**

VACANT/NOT IN USE

**Ownership:** Private

**Photo Information:**

**Roll:** 3 **Frame:** 15

**View:** NE

**Filename:** MLK-S-2807.TIF



**Survey Date:** 01/18/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1918, 1953

**Architect / Builder:**

**Description:** A large industrial complex comprised of seven major structures, including a 1918 steel shed (moved from the company's earlier location on S. Washington in 1953). Other buildings include a formeman's office, administration building, and hammer shop with Roberson ventilator. Not currently in operation.

**Area of Significance:** Industry

**Significance:** Lansing Drop Forge Company traces its history to Emergency Forging and Lansing Forge Company. It was incorporated as Lansing Drop in 1920 and occupied a 7-acre site at 2200 S. Washington for over 30 years. Following a fire, the company moved to this location (relocating a steel shed on the old site) around 1954. It acquired the Lansing Drop Forge in 1966, and in 1985 merged with Walco Corp. The produced largely for the automobile trade, especially Ford Motor Company.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1904-1963).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Lindell Drop Forge

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-29-401-033

**District Name:**

**Address:** 2830 S Martin Luther King

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48910

**Original Usage:** IPE/foundry

**Current Usage:**

IPE/foundry

**Ownership:** Private

**Photo Information:**

**Roll** 3 **Frame:** 16

**View:** SW

**Filename:** MLK-S-2830.TIF



**Survey Date:** 01/18/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**NR:** **SR:** **NHL:** **CF:** **36 CFR 61:**  **ER Project Number:**

**Date of Construction:** 1923-1965

**Architect / Builder:**

**Description:** This is a large, multi-story, shallow-pitched gable-roofed industrial building. It is built on a masonry foundation and is constructed of a steel frame sheathed with steel panels. The gravity ventilator from the forge is still on the roof but it has been painted. This complex has undergone numerous repairs and renovations that altered and connected its component buildings.

**Area of Significance:** Industry

**Significance:** This complex contains over a dozen buildings, including Hammer Shops, a Shear Building, a Die Building, Offices, Storage Sheds, a Boiler House, a Compressor Building and Offices. The Die and Hammer Buildings were built in 1923 and expanded during World War II, while other structures date to the 1950s and 1960s. It was the last independent forge in Lansing.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1904-1963); Sanborn Fire Insurance map (1926).

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Allen Sparks Gas Light Company

**Area Map Title:**

**Common Name:** Nuthouse Sports Bar

**Parcel Number:** 33-01-01-16-426-052

**District Name:**

**Address:** 418 E Michigan Avenue

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** IPE/factory

**Current Usage:**

CT/restaurant

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 16

**View:** SW

**Filename:** MICHIGAN-E-418.TIF



**Survey Date:** 01/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1912

**Architect / Builder:**

**Description:** This is a rectangular plan, single story brick commercial building with a decorative coped cornice. Its central entrance flanked by large glass display windows. The building has undergone numerous renovations, the most obvious being the addition of a prominent glass solarium on the east elevation, removal of the upper two stories, and refacing the building with brick.

**Area of Significance:** Industry

**Significance:** This building was constructed in 1912 on the site of the National Coil Company, organized by R.E. Olds for the manufacture of automobile ignition components. Occupants included the Michigan Manufacturing Company in 1913, Allen Sparks Gas Light Company (automobile accessories), from 1918 until the late 1920s, and by 1939, Groves All-Car Service.

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1898-1939); Sanborn Fire Insurance maps (1934-1951).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Peez Oil Corp.

**Area Map Title:**

**Common Name:** Brogan's Auto and Tire Service

**Parcel Number:** 33-01-01-16-428-061

**District Name:**

**Address:** 614 E Michigan Avenue

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/service station

**Current Usage:**

CT/auto repair garage

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 18

**View:** S

**Filename:** MICHIGAN-E-614B.TIF



**Survey Date:** 01/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1919

**Architect / Builder:**

**Description:** This is a single story rectangular plan concrete block building with a flat roof and a projecting flat canopy at the front. The original core structure dates from 1919, a gasoline filling station now embedded in the northwest corner of the building. Subsequent additions were constructed in 1921, 1923, and 1930 resulting in a four bay facade comprised of three automobile service doors and an office area with a pedestrian door flanked by two display windows. Two garage doors remain; the third, along with the pedestrian door and the windows, have

**Area of Significance:** Industry

**Significance:** The first occupant of this building was Peez & Cronan, who ran a gasoline filling station. By 1924, the building housed the Peez Oil Corporation, which added service bays to the operation in 1930. Peez occupied the structure up through World War II, selling Skelly gasoline to Lansing area motorists. The building was apparently empty in 1953, but in 1963 was occupied by the Lansing Tire Company. It still serves an auto-related function as an auto and tire service center.

**Bibliographic References:** Capital Area District Library, Local History Collection; City of Lansing Assessor's records; Lansing City Directories (1913-1963).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 726 E Michigan Avenue  
**City:** Lansing **County:** Ingham  
**Current Name:**  
**Historic Name:** Abel Motor Sales

**ZipCode:** 48906

**Parcel Number:** 33-01-01-15-302-001

**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**



**Resources on Property/Status**

**Historic Use:** CT/auto showroom and repair garage  
**Current Use:** Commercial  
**OwnerType:** Private

**Photo**

**Filename:** MICHIGAN-E-726.TIF  
**Roll:** 2 **Frame:** 22  
**View:** SE  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete **Roof:** Asphalt  
**Wall:** Brick **Other:**  
Concrete

**Area of Significance:**

- 1 Commerce
- 2 Architecture
- 3 Transportation

**Period of Significance:** 1926-1964

**Arch/Builder:**

**Date Built:** 1926

**Architectural Classification:** Commercial-Industrial

**Material Notes:**

**Description:** This one-part commercial block is a masonry building with a six-bay brick facade. The facade originally had two raised parapets with stone coping and geometric brickwork (removed after the 1960s). It has large display windows in the showroom area and a garage bay for entry to the service area. These functional parts are clearly expressed on the building exterior. Several original windows and transoms have been covered with plywood. The brick walls have been painted. The original service-area auto entrance is still utilized, but the door is a later replacement. Despite these alterations, the building retains many of the key features that distinguish an early twentieth-century auto salesroom.

**Other Buildings/Features:**

**Significant Persons:**

**Statement of Significance:** Occupied by Abel Motor (1929), W.H. Paul (Pontiac 1935), E.H. Bayes (Studebaker-Willys 1937), and Al Hansen (Studebaker 1945-64), this auto showroom represents an early form of dealership which were located along urban thoroughfares. After the 1960s, such locations were abandoned in favor of large-lot suburban sites. It is currently used for auto detailing and accessories business. Built in 1926, it was dedicated exclusively to the sale of Studebakers until 1964, the same year that marque was discontinued.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1921-1963).

**Surveyor's Comments:** Originally an auto dealership that consisted of a showroom and service areas.

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** Webert Block

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-15-155-062

**District Name:**

**Address:** 827 E Michigan Avenue

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48912

**Original Usage:** CT/auto showroom

**Current Usage:**

CT/office building

**Ownership:** Private

**Photo Information:**

**Roll** 2 **Frame:** 25

**View:** NW

**Filename:** MICHIGAN-E-827.TIF



**Survey Date:** 01/12/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**NR:** **SR:** **NHL:** **CF:** **36 CFR 61:**  **ER Project Number:**

**Date of Construction:** 1925

**Architect / Builder:**

**Description:** This two-story, rectangular plan masonry commercial building has a flat roof. The street level facade consists primarily of large display windows, with a corner entrance, while the second story displays evenly spaced replacement windows. The side elevation generally repeats the facade's composition. The building's date plaque reads "Webert 1925". In 1961 a large addition was constructed on its west elevation.

**Area of Significance:** Transportation Commerce

**Significance:** When constructed in 1925, this building initially housed an auto dealership, with an automobile service garage in the rear. The Truxell Sales Company (Oakland and Pontiac cars) was housed by this building before 1929 and Aaron DeRoy operated a dealership here in the early 1930s. By 1939 it was occupied by a wholesale grocery supply (A.W. Walsh), but after 1953, Adams Popcorn Supply/Adams Potato Chips is present. This building is typical of the dealerships that were the primary source of distribution for auto manufacturers during the this era.

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1921-1963).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 209 W Mt. Hope  
**City:** Lansing                      **County:** Ingham  
**Current Name:** Atmosphere Annealing  
**Historic Name:** Atlas Drop Forge Company

**ZipCode:** 48910                      **Parcel Number:** 33-01-01-28-103-093



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:** Contributing Site  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/manufacturing facility  
**Current Use:** IPE/manufacturing facility  
**OwnerType:** Private

**Photo**

**Filename:** MT.HOPE-W-209.TIF  
**Roll:** 1                                      **Frame:** 12  
**View:** SW  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete                      **Roof:** Asphalt  
**Wall:** Brick                                      **Other:**

**Area of Significance:**

- 1 Industry
- 2
- 3

**Period of Significance:** 1906-1963

**Arch/Builder:**                                      **Date Built:** 1917, 1942

**Architectural Classification:** Colonial Revival

**Material Notes**

**Description:** A complex industrial site comprised of approximately 10 major structures, including a brick office (built 1917, remodeled 1942), machine/die room (1917), forge shop and boiler room (1914 and 1924), heat treatment plant (1949), steam hammer (1920), and numerous supporting structures. Located at the corner of two major roads in the southeast section of Lansing, the property directly adjoins a railroad siding. The front office is a one-story brick addition (1943). The projecting entry has decorative brickwork and cast stone coping and doorway surround.

**Other Buildings/Features:**

**Significant Persons:** R. E. Olds

**Statement of Significance:** Lansing's oldest forging operation is Atlas Drop Forge, which was founded by R.E. Olds in 1906 to support production of his Reo automobile factory. It is one of five major forging operations in Lansing in the first half of the twentieth century. The forge complex was purchased in 1945 by Dana Corporation, and it continues to supply automotive parts to the parent company. As such, it is the only forging operation in Lansing still in continuous use. The complex retains the essential key features associated with the drop-forging process, and is significant for its early associations with R.E. Olds.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1904-1963); Sanborn Fire Insurance maps (1913-1945).

**Surveyor's Comments:** Despite considerable alterations/additions, many significant components remain preserved.

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing North

**Historic Name:** Schaible Gas Station

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-09-252-221

**District Name:**

**Address:** 220 E North

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** CT/service station

**Current Usage:**

CT/auto repair garage

**Ownership:** Private

**Photo Information:**

**Roll** 6 **Frame:** 18

**View:** S

**Filename:** NORTH-E-220.TIF



**Survey Date:** 02/08/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1929

**Architect / Builder:**

**Description:** This is a single story, concrete block building comprised of two parts. The earlier portion, built in 1929, was a filling station set diagonally on the lot with equal exposure to both North and Turner streets. In 1931, a three service bay wing was added, facing North Street (two bays remain; the third, adjacent to the original structure, has been closed off). The corner entry door is flanked by two steel casement windows. The original hipped front canopy and gas pumps were removed in 1970.

**Area of Significance:** Transportation

**Significance:** This corner gas station was built in 1929 for Charles Schaible. It was later operated by George Pardee (1953). It is an example of the evolution of the filling station to the service station, c. 1930. As the market shifted, earlier structures, originally only used to sell gasoline, added garage bays and began to offer automobile services, such as lubrication, repair and washing. As the market changed again in the 1970s, the business no longer sold gasoline and the canopy and gas pumps were removed, leaving the structure to be used only for repair and

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1913-1933).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:**

**Historic Name:** New Way Motor Co.

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-10-351-283

**District Name:**

**Address:** 704 E Oakland

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** IPE/industrial complex

**Current Usage:**

VACANT/NOT IN USE

**Ownership:** Private

**Photo Information:**

**Roll** 4 **Frame:** 3

**View:** W

**Filename:** SHERIDAN-706.TIF



**Survey Date:** **Surveyor:** M. Johnson

**Record Date:** **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** ca. 1905

**Architect / Builder:**

**Description:** There are two similar, rectangular plan brick factory buildings on this site. One of the buildings is two stories in height and the other is three, and they display masonry window hoods and sills, brick pilasters, and a generally symmetrical fenestration. The buildings have flat roofs and there are loading doors in the rear of the two-story building. These two buildings were originally one, but their center section was destroyed by fire.

**Area of Significance:** Industry

**Significance:** This was the site of the New Way Motor Company, which was founded by William Newbrough as a successor to the Clarkmobile Company in 1905. New Way, best known for its air-cooled engine, was a leading manufacturer of stationary gasoline engines. The company was successful during the early 20th century and its factory complex covered a number of city blocks. Most of the factory complex was demolished during the 1960s, and only these two remnants survive.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1906-1963); Sanborn Fire Insurance maps (1906-1951).



site was occupied by multiple tenants in the early 1960s, including Lansing Tool & Die, Novo Pump & Engine, American Marsh Pumps, and several other pump and tool manufacturers. Novo ultimately became part of American Marsh Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation, manufacturer of metal products for automotive, aerospace, defense and other industries.

**References:**

Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924).

**Surveyor's Comments:**

Building indicated on site plan as No. 12.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 705 E Oakland

**ZipCode:** 48906

**Parcel Number:** 33-01-01-10-305-012

**City:** Lansing

**County:** Ingham

**Current Name:** Demmer Engineering & Machine Corporation

**Historic Name:** Novo Gas Engine Company

**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**



**Resources on Property/Status**

**Historic Use:** IPE/complex

**Current Use:** IPE/complex

**OwnerType:** Private

**Photo**

**Filename:** OAKLAND-E-705B.TIF

**Roll:** 8

**Frame:** 19

**View:** w

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:** Steel

**Area of Significance:**

- 1 Industry
- 2
- 3

**Period of Significance:** 1921-1963

**Arch/Builder:**

**Date Built:** 1921

**Architectural Classification:** Production shed

**Material Notes:**

**Description:** This is a steel-framed brick structure with pilaster type walls. Located north of the foundry building (and attached by way of an enclosed passageway), it was commonly referred to as the rattler room, and was devoted to casting and cleaning metal parts. The building has a 25-1/2 foot center monitor with sloped side wings. The monitor has a low-pitched gable roof behind a stepped parapet wall with stone coping. Monitor walls have pivoting steel sash windows. Windows on the end (east and west) walls are multi-paned steel sash; several have been permanently enclosed with brick. Also on the end walls are large garage doors (overhead and sliding track). Part of a large industrial complex, the building has been altered but nevertheless retains many significant historic features. A storage room was added on the north elevation in 1942.

**Other Buildings/Features:**

**Significant Persons:** Clarence E. Bement

**Statement of Significance:** Novo Engine Company can trace its roots back to the Cady & Hildreth Company, which is credited with making one of the first successful gasoline engines in the country in 1891. During that decade, Cady & Hildreth built small two-cycle marine engines and farm pumps, and manufactured gray iron castings. In 1901 the company was reorganized as the Hildreth Motor & Pump Company, and then as the Hildreth Manufacturing Company. Under the direction of C.E. Bement (general manager), the company began the manufacture of a four-cylinder gasoline engine in 1908. Shortly thereafter, the company moved from its original location at 1131 Race Street to this facility, and around 1911 the name of the company was changed to Novo Engine Company. Over the next twenty years, the company would grow to encompass eight acres, with 236,000 square feet of floor space housing a power plant, pattern shop, gray iron foundry, two machine shop buildings, as well as the offices. In 1948 Novo made air- and water-

cooled engines, powering hoists, pumps, pavement breakers, reapers, harvesters, and orchard spray equipment. The site was occupied by multiple tenants in the early 1960s, including Lansing Tool & Die, Novo Pump & Engine, American Marsh Pumps, and several other pump and tool manufacturers. Novo ultimately became part of American Marsh Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation, manufacturer of metal products for automotive, aerospace, defense and other industries.

**References:**

Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924).

**Surveyor's Comments:**

Building indicated on site plan as No. 10.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 705 E Oakland

**ZipCode:** 48906

**Parcel Number:** 33-01-01-10-305-012

**City:** Lansing

**County:** Ingham

**Current Name:** Demmer Engineering & Machine Corporation

**Historic Name:** Novo Engine Company



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Listed

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/complex

**Current Use:** IPE/complex

**OwnerType:** Private

**Photo**

**Filename:** OAKLAND-E-705A.TIF

**Roll:** 8

**Frame:** 18

**View:** W

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:** Wood  
Stucco

**Area of Significance:**

- 1 Industry
- 2
- 3

**Period of Significance:** 1916-1963

**Arch/Builder:**

**Date Built:** 1916, 1920

**Architectural Classification:** Production shed

**Material Notes:**

**Description:** Construction of the second (and current) Novo foundry was completed in three major phases. The west end was completed in May 1916, the center in November 1916, and the east end in 1920, all of them under a single continuous roof. The foundry sits on a concrete slab, with wood and steel framing and brick sheathing. The west wall is buttressed with exterior pilasters at the corners and on each side of the large doorway openings, but part was removed and rebuilt in 1961 with the widening of Oakland (previously Sheridan). The building is capped by a raised monitor roof with low-pitched gable. Part of a large industrial complex, this building appears to be in active use.

**Other Buildings/Features:**

**Significant Persons:** Clarence E. Bement

**Statement of Significance:** Novo Engine Company, which incorporated this building into its expanding industrial complex, can trace its roots back to the Cady & Hildreth Company, which is credited with making one of the first successful gasoline engines in the country in 1891. During that decade, Cady & Hildreth built small two-cycle marine engines and farm pumps, and manufactured gray iron castings. In 1901 the company was reorganized as the Hildreth Motor & Pump Company, and then as the Hildreth Manufacturing Company. Under the direction of C.E. Bement (general manager), the company began the manufacture of a four-cylinder gasoline engine in 1908. Shortly thereafter, the company moved from its original location at 1131 Race Street to this facility, and around 1911 the name of the company was changed to Novo Engine Company. Over the next twenty years, the company would grow to encompass eight acres, with 236,000 square feet of floor space housing a power plant, pattern shop, gray iron foundry, two machine shop buildings, as well as the offices. In 1948 Novo made air- and water-cooled engines, powering hoists, pumps, pavement breakers, reapers, harvesters, and orchard spray equipment. The site

was occupied by multiple tenants in the early 1960s, including Lansing Tool & Die, Novo Pump & Engine, American Marsh Pumps, and several other pump and tool manufacturers. Novo ultimately became part of American Marsh Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation, manufacturer of metal products for automotive, aerospace, defense and other industries.

**References:**

Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924).

**Surveyor's Comments:**

Building indicated on site plan as No. 12.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 700 Porter  
**City:** Lansing                      **County:** Ingham  
**Current Name:** Demmer Engineering & Machine Company  
**Historic Name:** Novo Engine Company

**ZipCode:** 48906                      **Parcel Number:** 33-01-01-10-305-002



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/complex  
**Current Use:** IPE/complex  
**OwnerType:** Private

**Photo**

**Filename:** PORTER-700A.TIF  
**Roll:** 4                                      **Frame:** 23  
**View:** SW  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete                      **Roof:** Asphalt  
**Wall:** Brick                                      **Other:**

**Area of Significance:**

- 1 Industry
- 2
- 3

**Period of Significance:** 1909-1963

**Arch/Builder:**                                      **Date Built:** 1909

**Architectural Classification:** Industrial loft

**Material Notes**

**Description:** This two-story building is located immediately adjacent to the Michigan Central & Pere Marquette Railroad line. It has brick bearing walls on a concrete foundation and features large segmental-arched windows. Attached to the rear (south) is a one-story wing that originally functioned as the assembling area; the two-story front section served as the main office. A small one-story side (east) wing was added in 1930. The building interior was extensively remodeled in 1955, and a monitor roof was installed in the rear for the addition of two large presses.

**Other Buildings/Features**

**Significant Persons:** Clarence E. Bement

**Statement of Significance:** Novo Engine Company can trace its roots back to the Cady & Hildreth Company, which is credited with making one of the first successful gasoline engines in the country in 1891. During that decade, Cady & Hildreth built small two-cycle marine engines and farm pumps, and manufactured gray iron castings. In 1901 the company was reorganized as the Hildreth Motor & Pump Company, and then as the Hildreth Manufacturing Company. Under the direction of C.E. Bement (general manager), the company began the manufacture of a four-cylinder gasoline engine in 1908. Shortly thereafter, the company moved from its original location at 1131 Race Street to this facility, and around 1911 the name of the company was changed to Novo Engine Company. From this building -- the main office and assembling department -- the company would grow to encompass eight acres, with 236,000 square feet of floor space housing a power plant, pattern shop, gray iron foundry, two machine shop buildings, as well as the offices. In 1948 Novo made air- and water-cooled engines, powering hoists, pumps, pavement breakers, reapers, harvesters, and orchard spray equipment. The site was occupied by multiple tenants in the early 1960s, including Lansing Tool & Die, Novo Pump & Engine, American

Marsh Pumps, and several other pump and tool manufacturers. Novo ultimately became part of American Marsh Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation.

**References:**

Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924).

**Surveyor's Comments:**

Located on the former site of the Shultz stove factory and toy gun plant. Building indicated on site plan as Nos. 1 and 2.



pump and tool manufacturers. Novo would ultimately become part of American March Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation.

**References:**

Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924)

**Surveyor's Comments:**

Building indicated on site plan as No. 3.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 700 Porter  
**City:** Lansing **County:** Ingham  
**Current Name:** Demmer Engineering & Machine Company  
**Historic Name:** Novo Engine Company

**ZipCode:** 48906 **Parcel Number:** 33-01-01-10-305-002

**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**



**Resources on Property/Status**

**Historic Use:** IPE/complex  
**Current Use:** IPE/complex  
**OwnerType:** Private

**Photo**

**Filename:** PORTER-700C.TIF  
**Roll:** 4 **Frame:** 24  
**View:** SE  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete **Roof:** Asphalt  
**Wall:** Brick **Other:** Tile  
Concrete

**Area of Significance:**

- 1 Industry
- 2
- 3

**Period of Significance:** 1917-1963

**Arch/Builder:**

**Date Built:** 1917

**Architectural Classification:** Industrial loft

**Material Notes**

**Description:** This two-story building represents an interesting example of late mill construction, in which brick bearing walls have integral pilaster reinforcements. Before steel framing was widely adopted for industrial applications, pilaster type walls allowed a larger window expanse and greater capacity for carrying heavy floor loads than was previously possible. In this case, pilasters are 12" on center. The whole sits on a concrete foundation with 3' walls. Constructed in 1917, the building originally contained an office and engine assembly functions on the first floor, and a machine shop on the second. Interior framing is wood columns and steel beams. Exterior walls are flush brick, with recessed window bays that are corbelled to create a pilaster effect, and brick spandrels separating the floors. The large window openings -- with cast stone sills -- have been enclosed (ca. 1955) with a corrugate material, and smaller 1/1 double-hung units installed. The Porter Street elevation has 10 bays, and the entrance here is off-center, with glass transom and sidelights within a metal framework. There is tile coping along the walls.

**Other Buildings/Features**

**Significant Persons:** Clarence E. Bement

**Statment of Significance:** Novo Engine Company can trace its roots back to the Cady & Hildreth Company, which is credited with making one of the first successful gasoline engines in the country in 1891. During that decade, Cady & Hildreth built small two-cycle marine engines and farm pumps, and manufactured gray iron castings. In 1901 the company was reorganized as the Hildreth Motor & Pump Company, and then as the Hildreth Manufacturing Company. Under the direction of C.E. Bement (general manager), the company began the manufacture of a four-cylinder gasoline engine in 1908. Shortly thereafter, the company moved from its original location at 1131 Race Street to this facility, and around 1911 the name of the company was changed to Novo Engine Company. Over the next twenty years, the company would grow to encompass eight acres, with 236,000 square feet of floor space housing a power plant, pattern shop, gray iron foundry, two machine shop buildings, as well as the offices. In 1948 Novo made air- and water-cooled engines, powering hoists, pumps, pavement breakers, reapers, harvesters, and orchard spray equipment. The site was occupied by multiple tenants in the early 1960s, including Lansing Tool & Die, Novo Pump & Engine, American Marsh Pumps, and several other pump and tool manufacturers. This building was occupied for a time by the Handleman Drug Company. Novo would ultimately become part of American March Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924).

**Surveyor's Comments:** Alterations are reversible, integrity is good. Building indicated on site plan as No. 6.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 700 Porter  
**City:** Lansing                      **County:** Ingham  
**Current Name:** Demmer Engineering & Machine Company  
**Historic Name:** Novo Engine Company

**ZipCode:** 48906

**Parcel Number:** 33-01-01-10-305-002

**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**



**Resources on Property/Status**

**Historic Use:** IPE/complex  
**Current Use:** IPE/complex  
**OwnerType:** Private

**Photo**

**Filename:** PORTER-700D.TIF  
**Roll:** 5                                      **Frame:** 5  
**View:** SE  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete                      **Roof:** Asphalt  
**Wall:** Brick                                      **Other:** Steel frame

**Area of Significance:**

- 1 Industry
- 2
- 3

**Period of Significance:** 1919-1963

**Arch/Builder:**

**Date Built:** 1919-1920

**Architectural Classification:** Production shed

**Material Notes**

**Description:** This building is comprised of two parts that were constructed in 1919 and 1920. Both are similar in shape and design, and both were designed for assembly functions. They are steel frame structures, with steel frame roof trusses (supported by brick piers) and end walls of 12" common brick. There are three raised monitors running the length of the structure that stand about 24' tall, creating a distinctive boxy profile on the end elevations. The end walls have stepped parapets, and are capped with stone coping. The monitors originally had steel sash windows, but these have since been enclosed with sheet metal. Although many windows in the lower walls have been covered with plywood, those still exposed are large pivoting metal sash units. The placement of doors and windows conforms directly with the operations originally performed within the building to provide maximum natural illumination: doors are centered in the monitor bay, and are immediately flanked by tall, narrow windows, with a smaller window centered directly above the doorway. Large multi-pane windows are paired between the monitor bays. Some of these openings have been permanently enclosed with brick or concrete block, but overall the building integrity is very good.

**Other Buildings/Features**

**Significant Persons:** Clarence E. Bement

**Statement of Significance:** Novo Engine Company can trace its roots back to the Cady & Hildreth Company, which is credited with making one of the first successful gasoline engines in the country in 1891. During that decade, Cady & Hildreth built small two-cycle marine engines and farm pumps, and manufactured gray iron castings. In 1901 the company was reorganized as the Hildreth Motor & Pump Company, and then as the Hildreth Manufacturing Company. Under the direction of C.E. Bement (general manager), the company began the manufacture of a four-cylinder gasoline engine in 1908. Shortly thereafter, the company moved from its original location at 1131 Race Street to this facility, and around 1911 the name of the company was changed to Novo Engine Company. Over the next twenty years, the company would grow to encompass eight acres, with 236,000 square feet of floor space housing a power plant, pattern shop, gray iron foundry, two machine shop buildings, as well as the offices. In 1948 Novo made air- and water-cooled engines, powering hoists, pumps, pavement breakers, reapers, harvesters, and orchard spray equipment. The site was occupied by multiple tenants in the early 1960s, including Lansing Tool & Die, Novo Pump & Engine, American Marsh Pumps, and several other pump and tool manufacturers. For a time, these assembly buildings were occupied by the Christman Company and the Austin Company. Novo would ultimately become part of American March Pumps in Clarksville, TN. The building is currently part of a large industrial complex owned by the Demmer Corporation.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1887-1963); Sanborn Fire Insurance maps (1913-1951); Historic Michigan (Fuller, 1924).

**Surveyor's Comments:** Buildings indicated on site plan as Nos. 8 and 9.

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** NR Listed

**USGS Map Title:** Lansing South

**Historic Name:** Cady & Hildreth Company

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-09-402-013

**District Name:**

**Address:** 1131 Race

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** IPE/foundry

**Current Usage:**

VACANT/NOT IN USE

**Ownership:** Private

**Photo Information:**

**Roll** 6 **Frame:** 3

**View:** NW

**Filename:** RACE-1131.TIF



**Survey Date:** 01/19/03 **Surveyor:** M. Johnson

**Record Date:** 04/15/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** c 1855-78

**Architect / Builder:**

**Description:** This two-story brick building sits on the east bank of the Grand River near a historic mill race. It has multiple structural components, and has been altered by both fire and renovations. Alterations include a rear wing addition/reconstruction, reconfiguration of the front bays, addition of a gabled roof and multiple arched windows; refacing exterior brick walls, and gutting the entire for renovation as office space. The only evidence of the original structure are some partial walls within the building.

**Area of Significance:** Industry

**Significance:** Parts of this complex date to the 1850s, but most of it was rebuilt after a devastating fire in 1877. A cast iron foundry and machine shop, it was the location of the Cady & Hildreth Company, which produced one of Lansing's first successful gasoline engines here in 1891. The company reorganized as the Hildreth Motor & Pump Co. (1904) and the Hildreth Manufacturing Co. (1908), and ca. 1911 became the Novo Engine Company and moved to a new plant on Porter Street. Standard Castings Co. (1913), Standard Aluminum Castings Co.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1883-1963); Sanborn Fire Insurance maps (1885-1951).



**Statement of Significance:** Jarvis Engine & Machine Works was derived from the Lansing Iron & Engine Works, one of Lansing's more prominent steam engine manufacturers in the nineteenth century (earlier known as Lansing Iron Works). The parent company was established in 1872 and incorporated in 1885. Under the direction of O.M. and Edward Barnes, it became the leading manufacturer of steam engines, boilers, and pumps in Lansing. The company was briefly reorganized as Jarvis, Barnes & Company, and in 1893 became the Jarvis Engine & Machine Works, operating at a location on Grand Avenue. Founded by Samuel and Clement Jarvis (father and son), the company specialized in the production of steam engine and boiler works, in addition to general machine shop operations, repair, and experimental work. Early products included engines, boilers, condensers, heaters, pulleys, and pumps. In 1915, Ernest Dail joined the company as manager (later, as partner in the construction company). With the shift from steam to electrical power, the company turned to structural steel fabrication and in 1922 was renamed Jarvis Engineering Works. In the 1920s the company was one of the pioneers of the structural steel business in central Michigan. Their commissions included many of the larger downtown construction projects in Lansing, such as Olds Tower, Prudden Building, Masonic Temple and Bank of Lansing, in addition to buildings at Oldsmobile, Reo Motors and Motor Wheel Corporation. Construction of this building complex began in 1904, and housed both office and manufacturing space, as well as an apartment for the son. Samuel Jarvis retired from the company in 1911, and died in 1915. Son Clement died in 1952.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1898-1963); Sanborn Fire Insurance maps (1898-1951).

**Surveyor's Comments:** Outbuildings were not closely examined, but may be determined contributing elements in a single-site historic district upon further investigation.

**State of Michigan Historic Preservation Office  
Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 725 E Saginaw

**ZipCode:** 48906

**Parcel Number:** 33-01-01-10-353-005

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Prudden Wheel Company



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/complex

**Current Use:** VACANT/NOT IN USE

**OwnerType:** Private

**Photo**

**Filename:** SAGINAW-E-725.TIF

**Roll:** 12

**Frame:** 12

**View:** NW

**Credit:** M. Johnson

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:**

**Area of Significance:**

1 Industry

2

3

**Period of Significance:** 1916-1986

**Arch/Builder:**

**Date Built:** 1916

**Architectural Classification:** Industrial loft

**Material Notes** Reinforced concrete framing system.

**Description:** The Prudden Wheel building (later the main office of Motor Wheel Corporation) is one of the premiere examples of reinforced concrete construction in Lansing. Built in 1916, this industrial loft building was constructed using brick curtain walls and a reinforced concrete structural system referred to as the Kahn system. Patented by Julius Kahn, this was one of the most successful concrete construction systems marketed in the early twentieth century, and was widely adopted in the design of auto factories and industrial buildings requiring an open floor plan and ample natural lighting. In this case, large steel sash windows and brick walls were installed within the concrete framework to create the signature gridlike pattern associated with this construction method. Although window transoms remain - with multi-paned prism glass to diffuse and soften the outside light - the lower window sash have been replaced with fixed sash units. The building has an L-shaped plan that faces south onto E. Saginaw. The main entrance is located on this south facade. The doorway here has a concrete paneled surround and projecting paneled hood. Offices were originally located in the east end of the front wing, with auto parking indicated at basement level and machine shops occupying the remainder of the building. Once part of a fifteen-acre industrial complex, it is the last structure associated with that enterprise remaining on the site. The name of Prudden is incorporated into the brick smokestack on the west wing.

**Other Buildings/Features:**

**Significant Persons:** William K. Prudden, Harry F. Harper

**Statment of Significance:** W.K. & Prudden Company was founded in 1903 for the manufacture of racing sulky and automobile wheels. Reorganized in 1916 as Prudden Wheel, the current industrial loft building was constructed for offices and machine shops. Four years later, Prudden merged with Gier Pressed Steel and Auto Wheel to become Motor Wheel, and this building was the main office for the corporation through the 1950s. At its peak, Motor Wheel was the largest producer of wood and steel wheels in the world.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1904-1963); Sanborn Fire Insurance maps (1913-1951).

**Surveyor's Comments:**

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 701 E South

**ZipCode:** 48910

**Parcel Number:** 33-01-01-22-151-111

**City:** Lansing

**County:** Ingham

**Current Name:** Eyde Construction

**Historic Name:** Hugh Lyons & Company



**Evaluations**

**Contributes To:**

**NR Eligible:** Not NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/complex

**Current Use:** INDUSTRY/PROCESSING/EXTRACTING

**OwnerType:** Private

**Photo**

**Filename:** SOUTH-E-701.TIF

**Roll:** 1

**Frame:** 3

**View:** NE

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Area of Significance:**

1 Industry

2

3

**Wall:** Brick

**Other:** Metal: Steel frame

**Period of Significance:** 1922-1955

**Arch/Builder:**

**Date Built:** 1922

**Architectural Classification:** Industrial loft

**Material Notes**

**Description:** The Hugh Lyons company moved to this location in 1902, the former site of a furniture factory established in 1889 by James Potter. Once comprised of roughly ten major structures -- including workshop, dry kiln, storage, punch press, mill and paint shop and machine shops -- this is one of the few remaining on the site. Built in 1922, with an addition in 1924, it is a steel frame and reinforced concrete factory building. It has eight-inch curtain walls of brick and steel sash. In the 1930s, it was used for woodworking, finishing, and cabinetry.

**Other Buildings/Features:**

**Significant Persons:** James Potter

**Statement of Significance:** Hugh Lyons & Company was established in 1888 and incorporated in 1894. When Lyons opened his Lansing plant, it was only the second of its kind in the state (the other in Detroit). In addition to showcases, the company manufactured store fixtures and retail display items, as well as their patented hat conformator, which claimed to shape a hat precisely to the buyer's head. While the company continued to produce display fixtures, a portion of the plant was renovated in the 1920s for production of commercial truck bodies. Hugh Lyons made Reo truck bodies until 1930, when that company began producing their bodies in-house. The company also manufactured other specialty bodies for trucks and commercial vehicles, and marketed the Way Automatic Dump Body in the mid-twenties. As a prominent businessman and public figure, Hugh Lyons served two terms as mayor of Lansing. Only a small portion of the manufacturing complex remains today.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1904-1963); Michigan Roads and Pavement (Vol.XXII, 1/1/25); Sanborn Fire Insurance maps (1898-1951).

**Surveyor's Comments:**

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 301 N Sycamore

**ZipCode:** 48933

**Parcel Number:** 33-01-01-16-151-081

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Burton S. Gier House



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** D/single dwelling

**Current Use:** D/single dwelling

**OwnerType:** Private

**Photo**

**Filename:** SYCAMORE-N-301.TIF

**Roll:** 6

**Frame:** 10

**View:** NW

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Stone

**Roof:** Asphalt

**Wall:** Brick

**Other:** Stone  
Wood

**Area of Significance:**

- 1 Architecture
- 2 Industry
- 3

**Period of Significance:** ca. 1906-1928

**Arch/Builder:**

**Date Built:** 1884

**Architectural Classification:** Queen Anne

**Material Notes**

**Description:** Built in 1884 (and remodeled in 1926), the Gier house is a one-and-a-half story brick structure. It is front-gabled and has a steep-pitched roof with multiple cross gables. Porches on the front (east) and rear (west) elevations are hipped and supported by plain Doric columns, and there is a first-floor bay window on the street-facing side (south) elevation. A wood-framed, gabled wing on the north elevation contains an open porch (first floor) and sleeping porch (second floor). Window are flat-arched, but have arched stone hoodmolds that hint of Italianate influence. Alterations to the building are largely superficial and do not detract from its overall integrity.

**Other Buildings/Features:**

**Significant Persons:** B. S. Gier

**Statement of Significance:** B.S. Gier came to Lansing in 1905 as sales manager of the Lansing Wheelbarrow company. In 1908 he formed a partnership with Elmer I. Dail for the manufacture of light pressed-metal parts. With the dissolution of the Gier & Dail Manufacturing Company in 1913, he established the Fier Pressed Steel Company, which manufactured both light and heavy pressed-metal parts, particularly for automobiles. His plant on N. Larch was built in 1916, and in 1920 was merged with three other leading firms to form the Motor Wheel Company. Gier was vice-president and treasurer of Motor Wheel until his retirement and death in 1928.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Historic Michigan (Fuller, 1924); Lansing City Directories (1883-1963).

**Surveyor's Comments:**





**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1224 Turner  
**City:** Lansing                      **County:** Ingham  
**Current Name:**  
**Historic Name:** Turner Street hack barn

**ZipCode:** 48906                      **Parcel Number:** 33-01-01-09-257-041



**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Listed  
**Contributing:** Contributing Site  
**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** TRANSPORTATION  
**Current Use:** COMMERCE/TRADE  
**OwnerType:** Private

**Photo**

**Filename:** TURNER-1224.TIF  
**Roll:** 5                                      **Frame:** 12  
**View:** SE  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete                      **Roof:** Asphalt  
**Wall:** Concrete                              **Other:**

**Area of Significance:**

- 1 Commerce
- 2 Transportation
- 3

**Period of Significance:** 1911-30

**Arch/Builder:**

**Date Built:** 1911

**Architectural Classification:** No Style

**Material Notes** Rusticated concrete block walls.

**Description:** This is a two-story, rectangular commercial building with a flat roof. Wood framed with rusticated concrete block veneer, it has a five-bay facade. A one-story concrete block wing was added to the rear (east) wall in 1948. There are three pedestrian-type entry doors on the first floor and a large center window opening that may have once been a carriage bay door. The three second-floor facade windows are double-hung and appear to be original; they have cast stone headers and sills, and are symmetrically arranged. Side walls are stepped, and the roofline has tile coping.

**Other Buildings/Features:**

**Significant Persons:**

**Statement of Significance:** Built in 1911 (according to Assessor's records), this building was a bicycle repair shop (1913), livery and feed barn (1918-29), and a feed barn/gas station (1929) before shifting in the mid-thirties to standard retail/apartment space. An interesting and rare example of a transitional business operation that bridged the horse-drawn era and the automobile age, the building is highly significant within the theme of automotive history. It is a contributing resource within the North Lansing Historic Commercial District.

**References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1906-1963); Sanborn Fire Insurance maps (1898-1954).

**Surveyor's Comments:**

**State of Michigan Historic Preservation Office  
Reconnaissance Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** More Data Needed

**USGS Map Title:** Lansing South

**Historic Name:** Central Garage

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-09-401-021

**District Name:**

**Address:** 1122 N Washington

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** CT/auto repair garage

**Current Usage:**

CT/office building

**Ownership:** Private

**Photo Information:**

**Roll** 6 **Frame:** 7

**View:** NE

**Filename:** WASHINGTON-N-1122.TIF



**Survey Date:** 01/19/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1914

**Architect / Builder:**

**Description:** This rectangular plan single story brick commercial building presents a three bay facade defined by an off-center entry, a large central display window (partially infilled), and a vehicular entry door. The facade is further distinguished by four raised pilasters that flank each bay's single recessed panel and extend up to the building's corbelled cornice. Renovations to the building include replacement pedestrian and garage doors, framed reduction of the garage door, and a substantial enframing and infilling of the large central display window.

**Area of Significance:** Commerce Transportation

**Significance:** This building was constructed in 1914 but was generally vacant until 1921 when it housed the Central Garage. By 1924 the building was occupied by the Northern Coca Cola Bottling Company, but another automobile-related company moved into this building in 1929, the Galloway & Leach car service garage. This garage apparently continued to serve as an automobile repair facility through the 1930s, but by 1945 the Precision Tool Boring Company and a plumber shared the building, with the plumber still present as late as 1963.

**Bibliographic References:** City of Lansing Assessor's records; Lansing City Directories (1913-1963).

# State of Michigan Historic Preservation Office Reconnaissance Level Survey

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**NR Eligibility:** Not NR Eligible

**USGS Map Title:** Lansing South

**Historic Name:** S & K Garage

**Area Map Title:**

**Common Name:**

**Parcel Number:** 33-01-01-09-331-162

**District Name:**

**Address:** 1125 N Washington

**Municipal Unit:**

**County:** Ingham

**City:** Lansing

**State:** MI **Zip Code:** 48906

**Original Usage:** CT/auto repair garage

**Current Usage:**

CT/warehouse

**Ownership:** Private

**Photo Information:**

**Roll** 6 **Frame:** 8

**View:** NW

**Filename:** WASHINGTON-N-1125.TIF



**Survey Date:** 01/19/03 **Surveyor:** M. Johnson

**Record Date:** 04/12/03 **Recorder:** D. Hershberger/W. Rutter

**36 CFR 61:**

**NR:** **SR:** **NHL:** **CF:** **ER Project Number:**

**Date of Construction:** 1923

**Architect / Builder:**

**Description:** This single story, rectangular plan, brick-faced masonry building has a low, stepped parapet and rear-sloping roof. Its facade is purely functional, consisting of a single-bay garage door, flanked on either side by a pedestrian entry door, and a single, infilled, window. The side elevations, constructed of bare concrete block, are devoid of openings.

**Area of Significance:** Commerce

**Significance:** This building sits at the rear of the parcel, originally located behind a residential dwelling dating from 1899, but that burned and was razed in 1973. Built in 1923, the first city directory entry for this commercial garage was when Smith and Middleton occupied the structure in 1924. It was also operated briefly in 1925 as the S & K Garage, and then later as an upholstery shop. It is an example of the fairly unique concept of locating a free-standing commercial enterprise in a backyard location.

**Bibliographic References:** Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1908-1963).

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 1501 S Washington  
**City:** Lansing                      **County:** Ingham  
**Current Name:** Mug & Brush  
**Historic Name:** Standard Oil Company Filling Station

**ZipCode:** 48910                      **Parcel Number:** 33-01-01-21-402-002

**Evaluations**

**Contributes To:**  
**NR Eligible:** NR Eligible  
**Contributing:**  
**SHPO Evaluation:**



**Resources on Property/Status**

**Historic Use:** CT/service station  
**Current Use:** COMMERCE/TRADE  
**OwnerType:** Private

**Photo**

**Filename:** WASHINGTON-S-1501.TIF  
**Roll:** 1                                      **Frame:** 6  
**View:** E  
**Credit:** D. Hershberger  
**Caption:**

**Main Building**

**Foundation:** Concrete                      **Roof:** Metal  
**Wall:** Brick                                      **Other:**

**Area of Significance:**

- 1 Commerce
- 2 Architecture
- 3 Transportation

**Period of Significance:** 1923-1974

**Arch/Builder:**

**Date Built:** 1923

**Architectural Classification:** Mission/Spanish Colonial Revival

**Material Notes** 6/1 windows replaced.

**Description:** This small gas station building is a modest, square brick structure with an off-center entry, stone belt cours and sills, deep overhanging eaves, and orange clay tile roof. It also has double hung windows on the front facade, and a small, four-pane window on the side elevation. It is a highly restrained example of the Mission/Spanish Colonial Revival style, which was adopted nationally for Standard Oil's architectural program in the 1920s. Original pumps, lights and signs were removed in 1974, and the building was converted to a barber shop.

**Other Buildings/Features:**

**Significant Persons:**

**Statement of Significance:** In 1923 this was a Standard Oil filling station. It was subsequently operated by Lawrence Keyser Gas Station (1939), John Mercer Gas Station (1945), and Larry Keyser's Gas Station and Standard Service (1953-63). This station represents an early concept of retail functions in the automobile service industry, before repairs were incorporated as part of a standard roadside package. The station is significant for its extended period of service -- in the face of radical changes in retail practices -- and as an excellent and early example of product packaging on the commercial roadside landscape. It also stands out as an exceptional example of a retail gasoline outlet in an era before repair services were part of those operations.

**References:** City of Lansing Assessor's records; Lansing City Directories (1918-1963).

**Surveyor's Comments:** Pumps, lights, and signs removed in 1974, when building was converted to a barber shop.

**State of Michigan Historic Preservation Office**  
**Intensive Level Survey**

Thematic Survey of Early Automotive History in Lansing, Michigan (1890-1930)

**Address**

**Street:** 2100 S Washington

**ZipCode:** 48910

**Parcel Number:** 33-01-01-28-151-003

**City:** Lansing

**County:** Ingham

**Current Name:**

**Historic Name:** Duplex Truck Co.



**Evaluations**

**Contributes To:**

**NR Eligible:** NR Eligible

**Contributing:**

**SHPO Evaluation:**

**Resources on Property/Status**

**Historic Use:** IPE/factory

**Current Use:** CT/warehouse

**OwnerType:** Private

**Photo**

**Filename:** WASHINGTON-S-2100.TIF

**Roll:** 1

**Frame:** 9

**View:** SW

**Credit:** D. Hershberger

**Caption:**

**Main Building**

**Foundation:** Concrete

**Roof:** Asphalt

**Wall:** Brick

**Other:** Metal/steel

**Area of Significance:**

1 Industry

2

3

**Period of Significance:** 1916-1955

**Arch/Builder:**

**Date Built:** 1916

**Architectural Classification:** Not Applicable

**Material Notes**

**Description:** Located on a pie-shaped parcel at a five-point intersection (immediately served by an adjoining rail spur), this is a V-shaped building with an interior courtyard at the inside juncture of the two intersecting wings. Two stories tall, it is a reinforced concrete structure with pilaster type brick walls. The pilasters are capped with concrete blocks; windows also have stone sills and headers. Windows were originally multi-paned, pivoting metal sash, but most have been covered or replaced. There are capped pilasters between the window bays on both street-facing facades. The company's first-floor office was originally located in the south end of the east wing, with drafting rooms above. In the adjoining space were machine shops (first floor) and pattern shops (second floor). Storage, painting and assembly functions were located in the north wing.

**Other Buildings/Features:**

**Significant Persons:**

**Statement of Significance:** Founded as the Duplex Power Car Company in 1909, and reorganized as the Duplex Truck Company, this was one of the world's first heavy-duty truck manufacturers. The company came to Lansing in 1916, and built this factory for the manufacture of extremely powerful, heavy-duty vehicles. Duplex trucks offered many four-wheel drive models. Duplex trucks were used for many applications in construction, off-road, and fire-fighting. During World Wars I and II, Duplex also supplied trucks for military use. This plant was sold in 1923 to the Reo Motor car Company, which also used the facility for truck production as part of its commercial division. The building was used during World War II by the Nash-Kelvinator Corporation for the manufacture of aircraft propellers, and later by the Duo Therm Division of Reo for the production of oil heaters. After the sale of this building in 1923, Duplex moved their operations to an existing factory site on E. Hazel.

**References:**

Capital Area District Library, Local History Collection vertical file; City of Lansing Assessor's records; Lansing City Directories (1913-1963); Sanborn Fire Insurance maps (1920-1945).

**Surveyor's Comments:**